2020 2021

OVERHEAD WEIGHING
CATALOG

RICE LAKE®
WEIGHING SYSTEMS

RICE LAKE
TECHNICAL TRAINING SEMINARS
TRAIN for EXCELLENCE

Rice Lake Weighing Systems' training courses have something to offer everyone. From general product lines to programming and sales, Rice Lake's flexible, expertly taught classes are built to benefit the student, no matter the experience level. There are even specialty classes designed for unique product lines. Learn at your own pace, and gain hands-on skills you and your team can use during real-world service calls.

Apply for a class today!
Visit **www.ricelake.com/training** to fill out an online application and view our complete training schedule and course descriptions, or call **800-472-6703** and ask to speak with our training coordinator.

WORLD CLASS INSTRUCTORS

Over **500** Years of Scale Experience

Pictured are some of Rice Lake's many skilled instructors. Our team is composed of senior staff members specializing in technology, sales, project management and more. With years of experience and unmatched industry knowledge, students in every course learn from the very best.

Flexible Learning Options

Rice Lake Location Courses:

In-house instruction by experts at Rice Lake Weighing Systems' corporate headquarters

Online Courses:

Complete anywhere, at your own pace

Off-Site Courses:

Our instructors bring technical training to your region

International Courses:

Our instructor network periodically offers training overseas, available in multiple languages including Spanish

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Buyer's Guide

FREIGHT SERVICES OFFERED	"SMALL PACK"	LTL	TRUCK LOAD
Nationwide Same Day Service	Y* ***	Y*	N
Next Day (AM)	Y**	Y**	Y**
Next Day (END OF DAY)	Y	Y**	Y**
2 Day	Y	Y	Y
3 Day	Y	Y	Y
Ground	Y	Y	Y
Canada	Y	Y	Y
Mexico	Y	Y	Y
Express Freight (Air-over 150 lb)***	Y	Y	N
International (Sea)	Y	Y	Y
International (Air)	Y	Y	N

Subject to cost/distance

**Subject to distance*

****Subject to flight availability and proximity of nearest airport*

All MSI below the hook scales and dynamometers receive a calibration prior to shipping and may not be able to be shipped the same day as ordered

Same Day Services
These services do not carry the same service guarantees that standard delivery schedules do and are subject to availability.

Small Parcel Services
We ship with internationally recognized parcel carriers based on delivery time and services offered.

Determining Dimensional Weight for Small Parcel Shipments for Air and Ground

When shipping via air services, couriers require that the shipping weight be determined by the greater of the actual weight of the boxed product or its dimensional shipping weight. The formula for calculating dimensional shipping weight is as follows:

Domestic shipments via Ground or Air: L x W x H/139.

International air shipments L x W x H/139.

Please note: Rice Lake Weighing Systems takes the added precaution of double-boxing some of our electronic products and balances. This may result in higher dimensional weight charges by the carrier. Even with this added precaution, we suggest that you always ship high precision and fragile products via air services to reduce excessive handling.

Less Than Truck Load (LTL)
Full service LTL coverage for the continental United States, Puerto Rico, Canada and Mexico.
Note: A standard LTL delivery is considered to be one that ships from either a company or partner dock to arrival at a standard commercial address with disposition of the goods at the rear of the truck to enable off loading by material handling equipment provided by the consignee at either ground level or via loading dock. Allied to this, the freight in question should be palletized and secured in a way to facilitate the safe handling of the freight with no one dimension over seven feet, six inches.

Any LTL delivery falling outside of this criteria may well accrue accessorial charges levied by the carrier in line with their tariff rules. It is recommended that any potential accessorial cost are discussed at the time of order placement so that these costs can be billed appropriately at the time of shipment. If this is not the case, Rice Lake reserves the right to charge the customer retrospectively for any accessorial costs incurred during the delivery process.

Accessorial charges include, but are not limited to the following:
Lift gate, call for appointment and guaranteed delivery: Day and by 10:30 a.m. (where available). Excessive length, inside delivery <u>NOTE: To inside of first threshold crossed only,</u> high cost delivery areas such as government sites and mines, re-delivery, re-consignment, residential and restricted access shipments. All prices are available on request.

Full Truckload
Various truckload providers give us the ability to ship to the contiguous United States, Alaska, Canada and Mexico.

Forwarders (International Freight)
We can provide service through a forwarder of our choice, or select one of your preferred forwarders.
Air freight: All of our forwarders are internationally recognized brands.
Ocean freight: All of our forwarders are internationally recognized brands.

Shipping Information

Rice Lake Weighing Systems Freight Claims Procedure

Incidents can happen anytime between a package's departure from Rice Lake's loading dock and the time you receive it. For that reason, we are asking you to follow the procedures below when receiving a shipment.

The Bill of Lading (BOL) or Delivery Receipt (D/R) is the only record of the product's condition when it arrives at your site. If you do not inspect a shipment before signing, you are essentially waiving the right to collect on a damage claim regardless of whether the damage is visible or concealed. Your signature on a delivering carrier's BOL or D/R constitutes acceptance of the merchandise "as is." This proof is essential in filing a claim and holding the responsible parties accountable for items damaged or missing while in transit. Remember, once you sign, the goods and the responsibility are yours.

Receiving a Shipment

- Check immediately for possible damage during shipment. Inspect, examine and inventory your delivery as it is unloaded.
- Open cartons and containers. Any suspicion of damage or shortage must be noted on the BOL or D/R. This information must include the item, discrepancy and condition of the item in question. If this is NOT noted, the liability to prove the damage was done by the delivering carrier is your responsibility.
- The driver cannot leave your receiving dock until the BOL or D/R is signed, regardless if they are behind schedule or not. Do not be intimidated by the driver.

Damaged Shipment

- Discovered Damage: If the box, crate or merchandise is visibly damaged, beyond what you would consider to be normal shipping wear and tear, refuse the delivery and request a Return Authorization Number from the driver in order for the shipment to be sent back to its origin at no charge.
- Concealed Damage: Immediately document and photograph the damage and packaging. Keep all crating and packaging material with the damaged item(s) for inspection by the company's claim inspector until told to either return or dispose of the item(s). The item should be moved minimally; only to an area where it can be inspected by the carrier or their agent.
- Keep a second copy of the BOL or D/R noting the damage and the driver's signature.
- Call your Rice Lake Weighing Systems customer service representative to report the shortage and/or damage. Ideally, the call should be made before the driver leaves the site.

At this point, a claim for concealed damage will be started and an inspection will be requested. The inspector will determine if the damage was possibly caused by the carrier. A report and claim must be filed with the carrier within seven days after delivery. The sooner concealed damage is discovered and reported, the better.

Small Parcel Shipments

In general, it is the policy of small parcel carriers to NOT deliver damaged packages but rather take them back to the distribution center for evaluation. HOWEVER, that does not always happen. Occasionally if the package is deemed to be ok, it will be re-taped and delivered to the consignee. If damage is noticed while still at the distribution center, a notation should have been entered into the system.

If you do receive a package that appears to be damaged you can either refuse as damaged or you can accept the damaged package and report the damage (immediately) to your customer service representative here at Rice Lake with the tracking number. They will, in turn, contact the relevant team member from their support group so the claims process can be started. It should be noted that **Drivers do not normally note the package was damaged until it is brought back to the distribution center and a clerk does that.**

Signed Sealed Delivered... It's yours!

On average, regardless of carrier, 2% of all freight is damaged in transit. Don't let the delivery person slip away. And don't get left holding the bag.

Rice Lake merchandise is packaged carefully to arrive at your location on time, intact and in perfect working order. We don't ship damaged goods, and we work with many of the most reputable national carriers. But know this—anytime a package is sent, as many as 2 out of 100 will be mishandled. To be sure your business doesn't take the hit for someone else's mistake—INSPECT before you sign.

Whether or not the product itself has been damaged, remember—your signature accepts the delivery as is, releasing the carrier and supplier of all liability, unless you take action:

- Make note of any damage to the packaging, no matter how slight, including re-packaging, water damage, scratches to paint, etc. Take photos if possible to back up any necessary claims.
- Do not accept or sign for as "unchecked"—this is not an acceptable disclaimer.
- Where damage to contents is obvious, take photos and refuse the shipment.

Notify your supplier immediately with the claim number provided by the driver. Noting the condition of your delivery upon receipt is the only recourse when making a damage claim. Follow these steps and you'll get replacement merchandise faster, keep costs down and ensure the carrier is held responsible for their mistakes; not you, and not your supplier.

RICE LAKE
W E I G H I N G   S Y S T E M S

800-472-6703
www.ricelake.com

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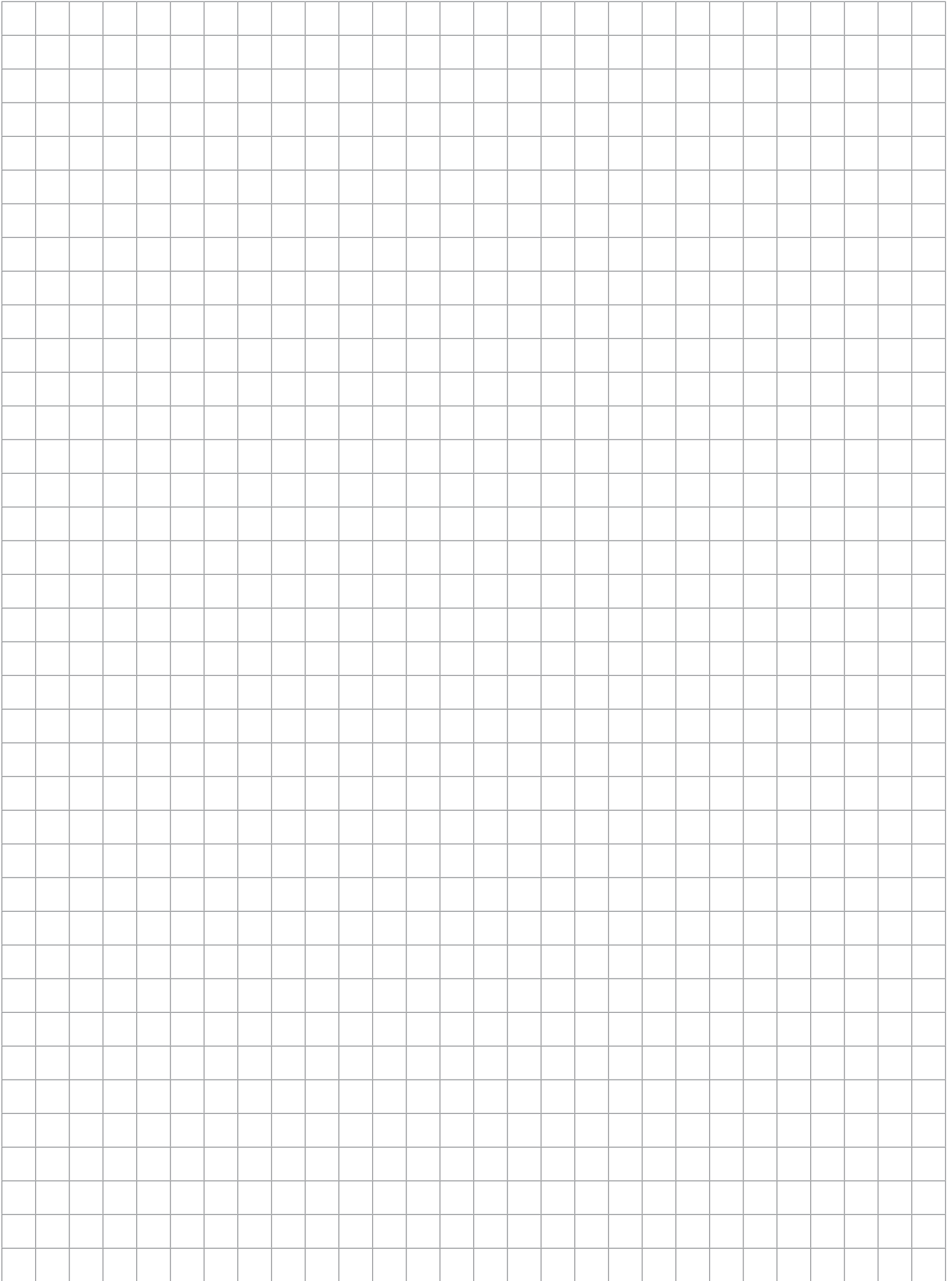
Customer Service Contacts

At Rice Lake Weighing Systems we strive to give you the best customer service in the industry. You can depend on our knowledgeable staff to deliver decisive, courteous assistance when you need it most.

Customer Service Representative Hours (CST):
Monday through Friday 6:30 AM to 6:30 PM; Saturday 8:00 AM to Noon

MSI

Phil Gray
Director of Operations

Bob Davis
Field Sales Engineer

Patrick Hillman
Technical Sales &
Service Specialist

Jack Nelson
Technical Sales
Specialist

Sue Radowick
Inside Sales

Andy Burish
Product Management
Specialist

Rob Nelson
Engineering Manager

David Garcia
Customer Service
Technician

Jacoby Button
Customer Service
Technician

Trademarks

The following product names, logos, brands and other trademarks featured or referred to within this publication are the property of their respective trademark holders.

Access™

Adventure Pro®

Allen-Bradley®

Amphenol®

AstraLabel™

AstraLink™

AutoCal™

Beldfoil®

Bitstream®

Bluetooth®

Cardinal®

Cent-O-Gram®

Centronics®

Citizen®

ConnexLink™

ControlNet®

Conxall®

CRS™

Cubis®

Datalogic QuickScan®

Datamax-O'Neil®

DeviceNet™

Dial-O-Gram®

DIGI®

Discovery™

Dymo®

EPL®

EPL2®

EPSON®

ESC/POS®

Excel™

Explorer®

Fairbanks™

Flintec™

Genius®

Hewlett-Packard™

Howe™

IBM®

InCal™

Intel®

Interchange®

Intercomp CS™

Intercomp PT300DW™

Intercomp PT300™

IONMASTER™

iPAQ™

ISOBAR®

ISOBLOK®

JavaPOS™

LabelView™

LifeGuard™

Linux®

LoopTracker™

Lotus™

Maxi-Scoop™

MaxWax™

Microline®

Microsoft®

Midrics®

MIFARE®

Minebea Intec

Mobile 5.0™

Motiontrap™

Motorola ColdFire®

MS-DOS™

NatraSorb®

Novell®

OHAUS®

OKI®

Pax®

pcANYWHERE®

Peachtree®

Pioneer™

PowerCell®

Powerware®

PreVent™

Prodigy Max™

Prodigy™

Profibus®

ProPrinter®

Quencharc®

Quickbooks®

QuickScan®

QuikSharp™

R Stahl®

Ranger™

Rapid Exchange®

Rockwell Automation®

Roman and Swiss™

S4M™

Sartorius®

Scout Pro®

SI®

STAR®

The Crosby Group LLC

SUREFOOT™

Symbol®

TekLynx®

Toledo®

Torque™

TRANSCORE®

Trooper®

Turck®

Valor®

Voyager®

Vulcan®

WinCT®

Windows®

WinWedge®

Xscale®

XTend-PKG™

Zebra®

ZigBee™

ZPL®

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The terms "buyer," "authorized reseller," and "customer" as used herein, shall mean the party placing the purchase order with Rice Lake Weighing Systems. No contractual relationship between Rice Lake Weighing Systems and said party shall arise until such time as a purchase order has been accepted by Rice Lake Weighing Systems and such acceptance has been indicated on a written acknowledgment. Tenders which do not stipulate an acceptance period shall not be binding. Orders shall be subject to Rice Lake Weighing Systems' standard terms and conditions as printed below, subject to correction for clerical errors.

These sales terms and conditions shall be binding if declared applicable in the tender or in the order acknowledgement. Any conditions stipulated by the buyer which are in contradiction to these sales terms and conditions shall only be valid if expressively acknowledged by Rice Lake Weighing Systems in writing.

1. Prices

(a) Rice Lake Weighing Systems (Rice Lake) prices are net 30 days Ex Works Rice Lake plant. Orders are subject to approval of our credit department with rights reserved to change or withdraw credit terms without notice and to terminate any orders when invoices for work done thereon have gone unpaid for 60 days.

(b) Prices do not include taxes of any kind by federal, state, municipality or other governmental authority, which Rice Lake may be required to collect or pay with respect to the sale or shipment of goods sold hereunder. Regardless of when any such taxes are determined or become payable, all taxes would be the responsibility of the customer and would be in addition to the prices quoted hereon.

(c) This quotation is made upon the basis of the cost of materials and labor as of the date of this quotation. A change in such costs shall give Rice Lake the right to alter prices to reflect such changes in cost.

(d) Requests for additional documentation, drawings, audits of factories or inspection of equipment in-process, additional testing, additional inspections and record retention will be quoted as a separate item even if we have already issued quotations for products and services.

2. Shipment, Title, Risk of Loss

(a) All shipments are Ex Works point of shipment. Title and risk of loss or damage passes to the customer upon presentation of the goods to the customer's carrier at Rice Lake's facility, except that title and risk of loss or damage as to customer's partially manufactured parts and raw materials delivered to Rice Lake, and as to jigs, fixtures and tools specially ordered for the customer shall at all times remain with the customer.

(b) Rice Lake does not carry fire insurance upon jigs, fixtures and tooling built by Rice Lake for customers or supplied to Rice Lake by customers, nor does Rice Lake carry insurance upon raw materials supplied to Rice Lake by customers. Customers assume all risk of loss, damage or destruction of jigs, fixtures, tooling or raw materials belonging to the customer in Rice Lake custody caused by fire, water, gas, natural disasters, strikes, insurrection, riots or by acts of the civil or military authorities and whether or not such loss, damage or destruction was the result of our negligence or misconduct or that of our agents or employees. The customer agrees to indemnify and hold Rice Lake harmless from all direct and consequential costs and damages resulting from such loss.

(c) Except as hereinabove stated, we agree to maintain all jigs, fixtures and tooling built by Rice Lake in working condition for their normal life only, except that our liability in this respect shall not extend more than one year after the completion of the most recent production order.

3. Quantity, Materials and Tolerances

(a) Unless dimensions are limited by a specific tolerance, it is understood that the production variations as published by Rice Lake will be acceptable.

(b) Rice Lake will not be responsible for color, thickness variations, or flaws in sheets or parts from which fabrications are made, nor for other material variations beyond our control.

(c) Rice Lake assumes no responsibility for loss or damage occurring by reason of delay or inability to deliver caused by fires, strikes, accidents, embargoes, car shortages, delays of carriers, insurrection, riots, acts of the civil or military authorities, nor will we assume responsibility for any reason whatever for damages of any kind on account of failure to deliver at the time specified. The customer shall indemnify and hold Rice Lake harmless from all direct and consequential costs and damages resulting from such loss or delay.

(d) Unless otherwise specified, delivery of 10 percent more or less of completed parts than the quantity specified shall constitute fulfillment of this order and any excess not exceeding 10 percent shall be accepted and paid for by the customer.

(e) In the event any raw material specified for incorporation into the product covered by this proposal shall become unavailable, Rice Lake shall notify the customer and the customer may direct Rice Lake to substitute available material for that originally specified; it being understood and agreed that the customer shall assume any and all consequences resulting from such substitution.

4. Patents

If this quotation covers parts made specifically for the customer, the customer agrees to indemnify and hold Rice Lake harmless against any loss resulting from infringement of patents or trademarks, or from claims of such infringements and shall pay all legal and defense costs incurred by Rice Lake in the defense of such actions.

5. Software

Unless specifically otherwise stated, any and all software associated or part of any product sold, loaned on trial or demonstration to the customer is to be considered proprietary to Rice Lake. The customer agrees not to duplicate for distribution or to sell or distribute in any way without the prior written consent of Rice Lake.

6. Changes and Cancellation: Rejection, Claims

(a) Orders placed with Rice Lake are not subject to cancellation, change or reduction in amount or suspension of deliveries except with Rice Lake's consent and upon terms that indemnify Rice Lake against loss. Unless confirmed in writing, all verbal agreements are void.

(b) Rice Lake will not be responsible for changes in design, deliveries or other instructions, unless they are furnished in writing. The customer agrees to pay for all tooling charges caused by changes in design or specifications.

Terms and Conditions

(c) Samples submitted shall be deemed approved unless written rejection is received within two weeks of submission.

(d) Manufactured parts will be shipped and billed as they are produced.

(e) Claims for shortage or rejections for defects must be made within 10 days of receipt of goods. Credit will be rendered on such defective parts after we have had an opportunity to inspect them, provided they are returned to our factory, transportation charges prepaid, within 30 days, and provided they have not been altered or defaced in any way.

7. Tooling and Designing

(a) In consideration of the engineering service necessary in the designing of jigs, fixtures and tooling not being charged for, but being quoted on the basis of labor and material only, and not at their fair market value, such jigs, fixtures and tooling shall remain in our possession for at least one year. Thereafter, the customer desiring delivery of such jigs, fixtures and tooling shall pay an engineering charge of 50 percent of the original price of said jigs, fixtures and tooling and accept same as-is.

(b) When requested, we will submit suggestions concerning design and construction of parts, but we will not accept responsibility of liability for the practicability of these suggestions if adopted by the customer.

8. Delivery and Adjustment to Price

(a) If the customer requests that the goods be manufactured and shipped on a date (or dates) earlier than originally agreed to by Rice Lake and the customer, and Rice Lake agrees to the earlier date (or dates), any increase in the cost of performance incurred by Rice Lake resulting from earlier manufacture and shipment will be included in an adjustment of the purchase price to be made by Rice Lake and will be paid by the customer.

(b) Should shipments be held beyond scheduled date for convenience of the customer, goods will be billed and charges will be made for warehousing, trucking and other expenses incident to such delay. Reasonable and sufficient care is taken by Rice Lake in crating its goods. Rice Lake cannot be held responsible for breakage after having received "in-good-order" receipts from the transportation carrier. All claim for loss and damage must be made by the customer to the carrier, but we will assist insofar as practical in securing satisfactory adjustment of such claims.

9. Payment and Liens

(a) All invoices shall be due and payable when submitted for payment in accordance with the revisions of Rice Lake terms. No withholding of funds, back charges or credits against amounts otherwise due to Rice Lake will be permitted unless specifically agreed to in writing by Rice Lake. Settlement of any amounts due to the customer will be negotiated as separate items and not as offsets against amounts otherwise due to Rice Lake from the customer for products sold hereunder.

(b) Any unpaid account for work done shall constitute a lien on any jigs, fixtures, manufactured parts and raw materials in Rice Lake possession. In the event any account remains open and unpaid for 90 days, Rice Lake reserves the right to use the customer's jigs and fixtures to make parts therefrom, and to sell or dispose of manufactured parts and raw materials.

(c) The customer shall not assign or transfer any rights or obligations arising from this proposal, or monies payable thereunder, without the prior written consent of Rice Lake, and any such assignment or transfer made without such written consent shall be deemed null and void.

10. Additional Provisions

(a) Errors—stenographic and clerical errors are subject to correction.

(b) These terms and conditions constitute the entire contract between the customer and Rice Lake, transcending any oral arrangements or representations which may be inconsistent therewith.

(c) This quotation is made under and shall be governed by the laws of the state of Wisconsin.

11. Resale of Rice Lake Weighing Systems Products

In order to ensure compliance with the U.S. Export Administration Regulations we ask you to comply with the following:

(a) The customer shall not export or re-export Rice Lake Weighing Systems products, either directly or indirectly, in contravention of any applicable law, statute or regulation and will first obtain any required licenses or authorizations from the relevant government authority when necessary as prescribed by law.

(b) The customer confirms that it is familiar with and complies with the relevant national and international export control regulations and embargo regulations. The customer furthermore confirms that it is in particular familiar with and complies with the U.S. Department of Commerce, Export Administration Regulations; U.S. Department of Treasury, OFAC Sanctions; the U.S. Department of Defense, ITAR requirements and the U.S. Department of State regulations.

(c) If deemed necessary, Rice Lake Weighing Systems, in individual cases may make further requests from the customer for information required for export compliance.

(d) Should it be necessary for the customer to obtain an export license from the appropriate authorities pursuant to the aforementioned regulations, the customer shall apply for such a license autonomously and at their own expense.

The foregoing warranties are exclusive and in lieu of all other express and implied warranties whatsoever, including but not limited to implied warranties of merchantability and fitness for a particular purpose. Rice Lake shall not be subject to any other obligations or liabilities whatsoever with respect to parts manufactured or supplied by Rice Lake or services rendered by it.

Anything herein to the contrary notwithstanding, Rice Lake shall not be liable for incidental and consequential damages, and in substitution for all remedies which the customer may have under any applicable law. The customer's sole and exclusive remedy against Rice Lake for any breach of warranty or any other breach relating to goods delivered pursuant hereto shall be for repair or replacement (at Rice Lake's option) of the goods or parts effected by such breach.

Warranty and Limitation of Liability

Warranties
Standard Product Limited Warranty

Rice Lake Weighing Systems (Rice Lake) warrants that all Rice Lake brand equipment and systems properly installed by an Authorized Reseller or original equipment manufacturer (OEM) will operate per written specifications as confirmed by the authorized reseller/OEM and accepted by Rice Lake. All systems and components are warranted against defects in materials and workmanship for one (1) year from the date of shipment from Rice Lake, unless otherwise stated in the product catalog or manual. Rice Lake warrants that the equipment sold here under will conform to the current written specifications authorized by Rice Lake. Rice Lake warrants the equipment against faulty workmanship and defective materials. If any equipment fails to conform to these warranties, **Rice Lake will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:**

Upon discovery by the Customer of such nonconformity, Rice Lake will be given prompt written notice with a detailed explanation of the alleged deficiencies.

Individual electronic components returned to Rice Lake for warranty purposes must be packaged to prevent electrostatic discharge (ESD) damage in shipment. Packaging requirements are listed in the publication, "Protecting Your Components From Static Damage in Shipment," available from the Rice Lake Equipment Return Department.

Examination of such equipment by Rice Lake confirms that the non-conformity actually exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair, or improper testing. Rice Lake shall be the sole judge of all alleged non-conformities.

Such equipment has not been modified, altered, or changed by any person other than Rice Lake or its duly authorized repair agents.

Cutting the load cell cable will void the warranty.

Rice Lake will have a reasonable time to repair or replace the defective equipment. The Customer is responsible for shipping the product to Rice Lake. Rice Lake is responsible for shipping the product back to the Customer.

In no event will Rice Lake be responsible for travel time or on-location repairs, including assembly or disassembly of equipment. Nor will Rice Lake be liable for the cost of any repairs made by others.

On all intrinsically safe equipment, any field repair or modifications voids any and all warranties expressed or implied and void F.M. approval.

Any loose hardware, screws, washers or non-ESD bags of hardware stored inside indicator will void warranty. This could cause harm to repair technician or damage CPU board.

If just the board is sent in for repair, the serial number of the product the board is from should accompany the board.

These warranties exclude all other warranties, expressed or implied, including without limitation warranties of merchantability or fitness for a particular purpose. Neither Rice Lake nor the authorized reseller will, in any event, be liable for incidental or consequential damages at the point of use. Rice Lake and the Customer agree that Rice Lake's sole and exclusive liability here under is limited to repair or replacement of such goods. In accepting this warranty, the Customer waives any and all other claims to warranty.

Should the seller be other than Rice Lake, the Customer agrees to look only to the seller for warranty claims. No terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of Rice Lake and the Customer.

Carrier Product Damage

As part of our commitment to customer satisfaction and in accordance with ISO 9001 standards, we make every attempt to pack our products so they will arrive in new condition. Occasionally due to rough handling or carelessness, product may arrive in a damaged condition. When this happens, don't assume that the shipment left Rice Lake in that condition or that the original packing was not sufficient.

The receiver, whether it is the authorized reseller or their Customer, is responsible for making a notation of damaged or missing items when signing the carrier's delivery receipt. If you or your Customer are not sure whether there is damage, we suggest adding a statement "CONDITION UNKNOWN" to the delivery receipt. In the event that damage or missing items are not properly documented at time of receipt, the carrier is relieved of responsibility and the receiver is then responsible for the cost to get the product back to new condition.

After the damage or shortage has been properly noted with the carrier, contact Rice Lake immediately and keep all the original packaging material for inspection by the carrier's representative. It is also helpful in the claim process to take pictures of the condition of the packaging and damage.

When drop-shipping items to your Customers, it is imperative that you advise them of their responsibility in accepting shipments from common carriers. Even if the equipment is not expected to be installed or used for a period of time, the shipment must be inspected at time of receipt in order to preserve their rights for making a claim.

Custom Software Limited Warranty

Rice Lake Weighing Systems (Rice Lake) warrants that (a) the software will perform in accordance with the specification and accompanying written endorsement by the Customer for a period of 90 days from the date of receipt; (b) any hardware accompanying the software will be free from defects in materials and workmanship under normal use and service for a period of one (1) year from the date of shipment from Rice Lake; and (c) the Customer should perform inspection and testing of software products prior to installation.

This limited warranty is void if failure of the software or hardware has resulted from accident, abuse, misapplication, or incorrect Customer specification. Any replacement software will be warranted for the remainder of the original warranty period or 30 days, whichever is longer.

If the software fails to conform to these warranties, Rice Lake will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:

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Warranty and Limitation of Liability

Upon discovery by the Customer of such nonconformity, Rice Lake will be given prompt written notice with a detailed explanation of the alleged deficiencies.

Examination of software by Rice Lake confirms that the nonconformity exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair, improper testing, or incorrect Customer specification. Rice Lake shall be the sole judge of all alleged non-conformities.

Rice Lake will have a reasonable time to repair or replace the software. The Customer is responsible for shipping charges both ways.

In no event will Rice Lake be responsible for travel time or on-location repairs, including assembly or disassembly of equipment. Nor will Rice Lake be liable for the cost of any repairs made by others.

These warranties exclude all other warranties, expressed or implied, including without limitation warranties of merchantability or fitness for a particular purpose. Neither Rice Lake nor the authorized reseller will, in any event, be liable for incidental or consequential damages at the point of use.

Rice Lake and Customer agree that Rice Lake' sole and exclusive liability here under is limited to repair or replacement of such goods. In accepting this warranty, the Customer waives any and all other claims to warranty.

Should the seller be other than Rice Lake, the Customer agrees to look only to the seller for warranty claims.

No terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of Rice Lake and the Customer.

Return Policies

Our commitment to our Customers states that if any standard product purchased from Rice Lake does not work, or if the incorrect product is shipped, **return it in its original shipping carton with all accessories in "like new" condition** for full credit or replacement within 30 days of purchase. **Electronic components returned to Rice Lake must be properly packaged to prevent electrostatic discharge (ESD) damage in shipment.** Packaging requirements are listed in the publication, "Protecting Your Components from Static Damage in Shipment," available online or from our Returns Department. This policy and the 30-day limit also apply to any products drop-shipped directly from the manufacturer.

Please note that if an incorrect quantity of product was shipped, Rice Lake must be contacted within 10 days of the purchase. Upon notification, we will immediately correct the situation.

A restocking charge will apply if equipment is not in like-new condition. The restocking charge is directly proportional to the amount of time and material required to return the item to resalable condition—we will make every effort to do this quickly and economically. Equipment that has been abused and/or shows signs of excessive wear and cannot be reconditioned and resold will not be accepted for return or credit after excessive wear or has been modified.

As Applied to Drop Shipments

All Rice Lake return guidelines apply to products drop-shipped directly from the manufacturer. If a perceived error occurs, Rice Lake will investigate to the best of our ability to determine if the error occurred prior to shipping, during shipping, or at the end user site. If our records and subsequent investigation indicate that the shipment was correct when it left our factory, our responsibility extends only to the authorized reseller, not their end user. Our standard product warranty notes that our coverage extends only to equipment and systems **properly installed by an authorized reseller.**

Obtaining an RMA

A return authorization number (RMA) is required for all materials being returned to Rice Lake for credit. Flat rate repairs require purchase orders at time of RMA issuance. When returning equipment for repair or warranty reimbursement consideration, these simple steps will help to expedite your request:

1. Call our Returns Department.
2. Please have your customer number and both the item description and problem for a repair.
3. Please have the original sales order or invoice number for items to be returned for credit or warranty.
   NOTE: See return policy
4. An RMA number will be given for eligible returns. This RMA number may also be faxed or emailed per your request.

Return Shipments Outside the United States for Repair, Warranty, Calibration or Other Services and Re-export.
For shipment to the USA:

1. The commercial invoice must include the following statement:
   i. "These goods are being returned for maintenance under"
   ii. Goods Made in the USA -- "HTS 9801.00.1012"
   iii. Goods NOT made in the USA -- "HTS 9801.00.2500"
2. The commercial invoice must list items individually and include the fair market value of the item based on its present condition for customs purposes only.
3. Please reference original Rice Lake commercial invoice number and date item was purchased if applicable.
4. Please note that failure to follow these procedures may cause delay and will certainly incur extra charges that will NOT be absorbed by Rice Lake.

Return Shipments Outside the United States Other Than for Repair, or Service Work Not Being Returned.
For shipment to the USA:

1. The commercial invoice must include the following statement:
   i. Goods Made in the USA -- "HTS 9801.00.1045"
   ii. Goods NOT made in the USA -- "HTS 9801.00.2500"
2. The commercial invoice must list items individually and include the fair market value of the item based on its present condition for customs purposes only.
3. Please reference original Rice Lake commercial invoice number and date item was purchased if applicable.
4. Please note that failure to follow these procedures may cause delay and possible reduction in your refund.
5. Please be advised that you may qualify for a refund of your duties and should contact your local customs authority for instructions and forms.

Warranty and Limitation of Liability

Special Order, Modified, Non-Catalog, or Non-Stock Items

Due to the added resources and difficulty in reselling special or non-standard products, returns or credit are not allowed for special order equipment, special software programs, equipment physically modified or altered in the field, discrete electronic components, relays, manuals, or opened software packages.

Calibration Test Weights

All weights returned for credit will be assessed a restocking charge because of the required inspection and verification. Credit is not allowed for serialized weights, calibration or traceable services performed on weights.

Calibration Test Weights

No returns will be accepted for items that are specifically modified for the Customer's requirements. Examples of such modifications may include, but not necessarily limited to:

1. Weights that have been specifically built to the customer's specifications.
2. Standard product specifically modified to the customer's specifications.
3. Standard product engraved with serial numbers at the customer's request.
4. Laboratory procedure charges.
5. Laboratory documentation fees.

Balances

Balances returned for credit within 30 days of purchase may be subject to a restocking fee if assessed by balance manufacturer.

Balance Repair Policy and Rates

We offer repair support on the following balance models:

• All Rice Lake brand models: Once we receive the equipment and the RMA form, an estimate will be prepared.

A minimum charge of one hour will apply. All balance repairs are covered by a 90-day limited warranty on parts and workmanship performed and noted under the scope of the specific repair. Balances must be packaged to adequately protect them from damage in transit. Please refer to "How to Prepare a Balance for Shipment" available on our website and from our Returns Department.

How to Prepare a Balance for Shipment

The best and most effective method for shipping a balance at any time and for any reason is to use the original manufacturer's packaging materials and subsequently double box it as described below. Teach your Customers to retain the packing set. Please remember that due to the nature of the equipment, new packaging materials can be very expensive.

In the event that the original manufacturer's packaging materials are not available, follow these instructions for top loading balances.

1. Remove the weighing platform cover, support buttons, weighing platform, floor plate and other devices installed in the weighing chamber. Pack these pieces individually in bubble wrap and tape the wrapping closed. Follow this same procedure for AC adapters and power cords. Please note that AC adapters and power cords are necessary to adequately evaluate the problem.

2. Examine the device (refer to the operating instructions) and if necessary, re-install or tighten any shipping screws/retaining devices to prevent damage to the weighing mechanism during shipment.
3. If the floor plate is not removable, ensure it is securely in place and cannot come loose during shipment, even if the balance is inverted. Do NOT invert the balance to test the security of the floor plate.
4. Clean the device of any loose debris or potential contaminants to our testing facility.
5. Prepare and sign a Statement of Decontamination (form #0679). This form MUST be included in a separate packing list envelope on the outside of the box with the "Statement of Decontamination Form" statement clearly visible.
6. Using Scotch tape or "speed" tape, tape all the glass doors on the device CLOSED. Be sure the tape is securely affixed and will not come off during shipment. Please note that on some devices, the glass breeze-break around the weighing chamber can actually be disassembled and packed separate prior to shipment. Refer to the manufacturer's operating instructions. If this is a feature of the device being return, disassemble the breeze break and pack it in its own packing material and box.
7. Use a large box that will provide a minimum of 3 inches of space around the device for loose-fill packing material.
8. Place a padding of foam or Styrofoam (at least 1inch thick) at the bottom of the box.
9. Place the balance in a large plastic bag and seal the bag closed.
10. Please put the device on top of the foam padding or Styrofoam from step 8 above.
11. Ensure that there is at least three inches of clearance between the top of the balance and the top of the box.
12. Using generous amounts of anti-static loose-fill packing material, fill all the spaces around the balance. Shake the box to cause the material to settle and add additional loose fill as necessary.
13. Place the small box containing all the items from step 1 above on top of the loose fill covering the balance. Add additional loose fill to completely cover all items within the box.
14. Double pack this box in another box that will again provide an additional two inches of space around the inner box. Fill all existing space between the inner and outer box with copious amounts of anti-static loose fill packing material.
15. Seal the box and include all the necessary documentation on the outside of the box. Don't forget the Decontamination Form (form #0679) from step 5 above.

Repair Service Policies

Our Service Department is staffed Monday through Friday from 6:30 A.M. to 6:30 P.M., and Saturday from 8:00 A.M. to noon, Central time. For those utilizing the conveniences of the internet, we have an e-mail address dedicated to technical support. Please contact Rice Lake at service@ricelake.com for answers to your technical questions and the status of repair products during normal business hours.

Warranty and Limitation of Liability

We provide quality and timely repairs for the products we sell. Flat rate repair is offered for selected models of indicators, printers and remote displays. Prior to returning a product for repair, our returns department will work with you to determine some key factors that will help Rice Lake better serve you. Please provide the following via phone to extensions 5348 or an RMA form.

- Customer Number: Without a customer number we cannot issue an RMA number.

- Ship-to Address: Your customer number will bring up the bill-to address. You must inform Rice Lake of the ship-to address if it's different than the bill-to address.

- **Original sales and invoice orders: Required on warranty claims.**

- Freight Type: Unless stated otherwise, we ship the device back to you utilizing the same freight type in which we received it. If Rice Lake is responsible for freight charges, the carrier will be selected at the sole discretion of Rice Lake.

- **Definition of Product and Problem: Please provide as much detail as possible regarding the type of product, application and problem.**

- Purchase Order Number for Flat Rate Repair: Once we receive the equipment and the RMA, equipment for flat rate repair will be processed immediately. Other equipment will be evaluated and a minimum evaluation charge will apply (contact the factory for exact pricing).

You may be asked about the possibility of a new replacement product. It may be in your customer's best interest to explore the option of purchasing a new product if the repair will exceed 50 percent of authorized reseller net price, since new products carry full-warranty benefits.

Please note that our hourly service rate on all current Rice Lake products. Contact the factory for exact pricing. There is a 120-day limited warranty on parts and workmanship performed and noted under the scope of the specific repair.

California Proposition 65
Rice Lake Weighing Systems Statement

Proposition 65 requires businesses to inform Californians about exposures to chemicals that are known to cause cancer, birth defects or other reproductive harm. These chemicals may be in the products you purchase, or they may be exposed to you at home, at the workplace or within the environment. Proposition 65 enables Californians to make informed decisions about their exposures to these chemicals.
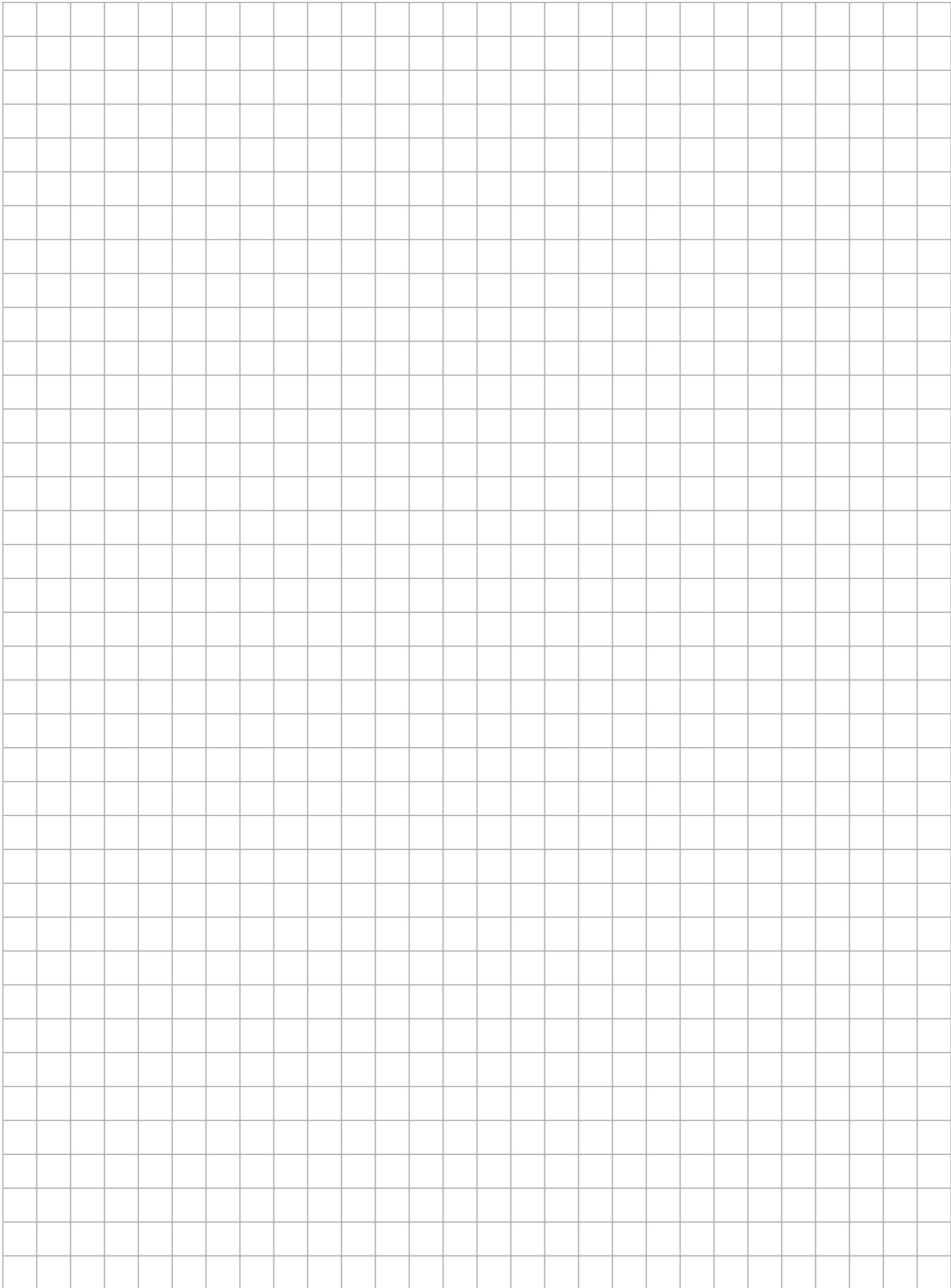
Rice Lake Weighing Systems wants to be proactive in regards to Proposition 65 and provide information about the products we produce, distribute and use to manufacture equipment we sell.

We are providing this warning based on the knowledge that one or more chemicals included in the California Proposition 65 list known to cause cancer, birth defects or other reproductive harm may be present in Rice Lake Weighing Systems products and workplaces.

⚠ WARNING: Chemicals listed in California Proposition 65 known to cause cancer, birth defects or other reproductive harm may be present only in trace amounts or contained within Rice Lake Weighing Systems products and proper encapsulation equipment. This warning is provided out of an abundance of caution to enable you to be an informed consumer.

More information about California Proposition 65 can be found at www.P65Warnings.ca.gov

Crane Scales

www.ricelake.com | Phone: 800-472-6703

RICE LAKE

ESPAÑOL

Visite **ricelake.com/spanish** para ver todos los materiales Rice Lake que están disponibles en español.

The following product names, logos, brands and other trademarks featured or referred to within this publication are the property of their respective trademark holders.

MSI-3460 Challenger 3

Contact MSI for application consultation

Standard Features

- Crane scale unit with five-digit, 1.5 in (38 mm) LED display
- Top lifting eye and bottom swivel hook
- Lb/kg switch selectable
- Six volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)
- Meets or exceeds OSHA, ANSI, ASME and other safety design standards (5:1 Ultimate Safety Factor)
- NTEP Certified (250 lb-10,000 lb capacities)

Options

(Contact MSI for application consultation)

- Rugged remote control (control for Off, Zero, Tare and other functions)
- RF modem install for connectivity to MSI-8000, MSI-8000HD RF, MSI-8004HD RF remote display (100 ft line of sight), TranSend and LaserLight2 remote display
- Universal direct power supply (115/230 VAC)
- Audible alarm
- Wi-Fi and Bluetooth® communication are available for specialty applications.

Approvals

NTEP

OIML
pending

C E
pending

Optional rugged remote

Specifications

Accuracy:
± (0.1% +1 d) of applied load

Resolution:
2000 to 3750 d standard (Up to 10,000 d available)

Enclosure:
NEMA Type 4, IP65, powder coated cast aluminum

Lifting Eye & Hook:
Crosby® or equivalent with 360° non-bearing swivel hook

Design Overload:
200% Safe / 500% Ultimate

Functions:
Power: Turns unit ON or OFF Zero: Zeros applied load up to 100% of capacity (limited range in NTEP/OIML configurations) Tare: Tares applied load and displays weight in Net mode User: Programmable as TEST, UNITS, NET/GROSS, TOTAL, PEAK HOLD & SETPOINTS

Display:
5-digit, 1.5 in (38 mm) LED with programmable brightness control

Displayable Units:
Pounds or kilogram selectable

Annunciators:
COZ, Net, Gross, Total, Peak, Low Battery, lb/kg, Motion, Setpoints, ACK IN, ACK OUT, RF

Power:
6 Volt rechargeable battery. 115/230 VAC battery charger is included

Operating Time:
Up to 80 hours between charging with typical use. Less with optional RF Model

Operating Temperature:
-40° to 104°F (-40° to 40°C)

Auto-Off Mode:
Select for 15, 30, 45, 60 minutes or Off

Auto Sleep Mode:
Power down during non-use and power up with weight change or any key press

Service Counters:
Counts number of lifts over percentage of capacity and lifts over capacity

Calibration:
Digital

Filtering:
OFF, LO, HI-1, HI-2 selectable

Warranty:
One-year limited

Approvals:
NTEP CC 86-021 (250 thru 10,000k only)

Part Number/Price

Part #	MSI Part #	Description	Capacity	Resolution	Est. Weight	Price
139102	502887-0001	MSI-3460 250 lb/500 lb cap F/A	250 lb (125 kg) / 500 lb (250 kg)	0.1 lb (0.05 kg) / 0.2 lb (0.1 kg)	22 lb (10 kg)	$1,890.00
139103	502887-0002	MSI-3460 1,000 lb/2,000 lb cap F/A	1,000 lb (500 kg) / 2,000 lb (1,000 kg)	0.5 lb (0.2 kg) / 1 lb (0.5 kg)	22 lb (10 kg)	$1,990.00
139104	502887-0003	MSI-3460 5,000 lb/10,000 lb cap F/A	5,000 lb (2,500 kg) / 10,000 lb (5,000 kg)	2 lb (1 kg) / 5 lb (2 kg)	39 lb (18 kg)	$2,495.00
139105	502887-0004	MSI-3460 15,000 lb cap F/A	15,000 lb (7,000 kg)	5 lb (2 kg)	67 lb (30 kg)	$3,415.00
139110	502887-0005	MSI-3460 250 lb/500 lb cap F/A (with RF modem for connectivity to model MSI-8000 and remote)	250 lb (125 kg) / 500 lb (250 kg)	0.1 lb (0.05 kg) / 0.2 lb (0.1 kg)	22 lb (10 kg)	$2,065.00
139111	502887-0010	MSI-3460 1,000 lb/2,000 lb cap F/A (with RF modem for connectivity to model MSI-8000 and remote)	1,000 lb (500 kg) / 2,000 lb (1,000 kg)	0.5 lb (0.2 kg) / 1 lb (0.5 kg)	22 lb (10 kg)	$2,195.00
139112	502887-0011	MSI-3460 5,000 lb/10,000 lb cap F/A (with RF modem for connectivity to model MSI-8000 and remote)	5,000 lb (2,500 kg) / 10,000 lb (5,000 kg)	2 lb (1 kg) / 5 lb (2 kg)	39 lb (18 kg)	$2,645.00
139113	502887-0012	MSI-3460 15,000 lb cap F/A (with RF modem for connectivity to model MSI-8000 and remote) Capacity: 15,000 lb (7,000 kg) Resolution: 5 lb (2 kg)	15,000 lb (7,000 kg)	5 lb (2 kg)	67 lb (30 kg)	$3,620.00
176905 *	N/A	MSI-3460 250 lb/500 lb cap F/A with Bluetooth®	250 lb (125 kg) / 500 lb (250 kg)	0.1 lb (0.05 kg) / 0.2 lb (0.1 kg)	22 lb (10 kg)	Consult
176906 *	N/A	MSI-3460 1,000 lb/2,000 lb cap F/A with Bluetooth®	1,000 lb (500 kg) / 2,000 lb (1,000 kg)	0.5 lb (0.2 kg) / 1 lb (0.5 kg)	22 lb (10 kg)	Consult
176907 *	N/A	MSI-3460 5,000 lb/10,000 lb cap F/A with Bluetooth®	5,000 lb (2,500 kg) / 10,000 lb (5,000 kg)	2 lb (1 kg) / 5 lb (2 kg)	39 lb (18 kg)	Consult
176908 *	N/A	MSI-3460 15,000 lb cap F/A with Bluetooth®	15,000 lb (7,000 kg)	5 lb (2 kg)	67 lb (30 kg)	Consult
176909	N/A	MSI-3460 250 lb/500 lb cap F/A with Wi-Fi	250 lb (125 kg) / 500 lb (250 kg)	0.1 lb (0.05 kg) / 0.2 lb (0.1 kg)	22 lb (10 kg)	$2,105.00
176910	N/A	MSI-3460 1,000 lb/2,000 lb cap F/A with Wi-Fi	1,000 lb (500 kg) / 2,000 lb (1,000 kg)	0.5 lb (0.2 kg) / 1 lb (0.5 kg)	22 lb (10 kg)	$2,220.00
176911	N/A	MSI-3460 5,000 lb/10,000 lb cap F/A with Wi-Fi	5,000 lb (2,500 kg) / 10,000 lb (5,000 kg)	2 lb (1 kg) / 5 lb (2 kg)	39 lb (18 kg)	$2,700.00
176912	N/A	MSI-3460 15,000 lb cap F/A with Wi-Fi	15,000 lb (7,000 kg)	5 lb (2 kg)	67 lb (30 kg)	$3,695.00

Bluetooth modems only work with certain Android devices. Please contact MSI for potential applications.

Options/Accessories

Part #	MSI Part #	Description	Est. Weight	Price
140049	C00502-0001	Battery assembly, 6 volt rechargeable	3 lb (1.4 kg)	$125.00
139152	502956-0001	Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)	5 lb (2.25 kg)	$160.00
139153	502956-0002	Battery charger 115/230 VAC, 50/60 Hz (EC plug standard)	5 lb (2.25 kg)	$170.00
197201	N/A	Battery charger, 115 VAC, 50/60 Hz (NA plug standard) CEC compliant	—	$205.00
149549	503486-0001	Universal 115/230 VAC 50/60 Hz (NA plug standard) battery charger for MSI-8000 remote display	3 lb (1.4 kg)	$135.00
178004	N/A	LaserLight2, 4 in (101 mm) six-digit RF scoreboard (requires MSI-3460 with RF modem)	21 lb (10 kg)	$2,135.00
178006	N/A	LaserLight2, 6 in (152 mm) six-digit RF scoreboard (requires MSI-3460 with RF modem)	37 lb (17 kg)	$2,545.00
Consult	N/A	AC power supply	—	$295.00
Consult	N/A	Audible setpoint alarm	—	$315.00
139395	N/A	Challenger retrofit to 3460 electronics	1 lb	$1,000.00
173014	N/A	Rugged remote control (requires MSI-3460 with RF modem)	—	$280.00
139381	503208-0001	MSI-8000 RF remote display (requires MSI-3460 with RF modem)	5 lb (2.25 kg)	$1,190.00
153591		MSI-8000HD ScaleCore RF remote display (requires MSI-3460 with RF modem)	—	$1,300.00

CRANE SCALES

www.ricelake.com | Phone: 800-472-6703

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MSI-4260 Port-A-Weigh

Standard Features

- Crane unit with five-digit, 1.2 in (30 mm) LED display
- Top lifting eye or shackle, bottom thrust bearing swivel hook
- 12 volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)

Approvals

Options

(Contact MSI for application consultation)

- Rugged remote control (control for Off, Zero, Tare and other functions)
- RF modem install for connectivity to MSI-8000, MSI-8000HD RF, MSI-8004HD RF remote display (100 ft line of sight), TranSend and LaserLight2 remote display
- Anti-heat shielding for high temperature applications
- Substitute bottom swivel hook with shackle
- Oversized top lifting eye or shackle
- Oversized bottom hook
- Universal direct power supply; 85-265 VAC, 47–440 Hz / 130–300 VDC
- Low headroom top adapter
- Audible alarm
- Wi-Fi and Bluetooth® communication are available for specialty applications. (Contact MSI for application consultation))
- Custom top and bottom interfaces
- Factory Mutual and ATEX approved Intrinsically Safe models available

Optional rugged remote

Specifications

Accuracy:
± (0.1% +1 d) of applied load

Resolution:
3,000 to 5,000 d standard (up to 10,000 d available)

Enclosure:
NEMA Type 4, IP66 marine grade 356 alloy anodized cast aluminum

Lifting Eye, Shackle & Hook:
Crosby® or equal with 360° thrust-bearing swivel hook

Design Overload:
200% Safe / 500% Ultimate (except where noted)

Functions:
Power: Turns unit on or off
Zero: Zeros applied load up to 100% of capacity (limited range in NTEP Certified configuration)
Tare: Tares applied load and displays weight in Net mode F1: Programmable as test, units, net/gross, total and peak hold

Display:
Five-digit, 1.2 in (30 mm) LED with programmable brightness control

Displayable Units:
Pounds or kilograms selectable

Annunciators:
COZ, Net, Gross, Total, Peak, Low Battery, lb/kg, Motion, Setpoints

Power:
12 volt rechargeable battery. 115/230 VAC battery charger is included

Operating Time:
Up to 200 hours between charging with typical use, less with RF Modem option

Operating Temperature:
-40º F to 122° F (Industrial)

Auto-Off Mode:
Select for 15, 30, 45 minutes, 1 hour or Off

Auto Sleep Mode:
Power down during non-use and power up with weight change or any key press

Service Counters:
Counts number of lifts over percentage of capacity and lifts over capacity

Calibration:
Digital

Filtering:
OFF, LO, HI-1, HI-2 selectable

Warranty:
One-year limited warranty

Approvals:
NTEP CC 89-090 - 500 lb-2,000 lb (250 kg-1,000 kg)
NTEP CC 89-090A1 - 5,000 lb-70,000 lb (2,000 kg-35,000 kg)
NTEP CC 88-098A2 - 5,000 lb-70,000 lb (2,000 kg-35,000 kg)

Part Number/Price

Part #	MSI Part #	Description	Capacity	Resolution	Est. Weight	Price
139460	503413-0001	MSI-4260B 500 lb F/A	500 lb (250 kg)	0.2 lb (0.1 kg)	53 lb (24 kg)	$3,885.00
139461	503413-0002	MSI-4260B 2,000 lb F/A	2,000 lb (1,000 kg)	1.0 lb (0.5 kg)	53 lb (24 kg)	$4,080.00
139462	503413-0003	MSI-4260B 5,000 lb F/A	5,000 lb (2,500 kg)	1.0 lb (0.5 kg)	62 lb (28 kg)	$4,190.00
139463	503413-0004	MSI-4260B 10,000 lb F/A	10,000 lb (5,000 kg)	2.0 lb (1.0 kg)	62 lb (28 kg)	$4,195.00
139464	503413-0005	MSI-4260B 20,000 lb F/A	20,000 lb (10,000 kg)	5.0 lb (2.0 kg)	105 lb (47 kg)	$5,920.00
139465	503413-0006	MSI-4260B 30,000 lb F/A	30,000 lb (15,000 kg)	10 lb (5.0 kg)	125 lb (55 kg)	$5,950.00
139466*	503413-0007	MSI-4260B 50,000 lb F/A	50,000 lb (25,000 kg)	10 lb (5.0 kg)	235 lb (106 kg)	$9,140.00
139467**	503413-0008	MSI-4260B 70,000 lb F/A	70,000 lb (35,000 kg)	20 lb (10 kg)	270 lb (121 kg)	$11,380.00
139468***	503413-0009	MSI-4260B 100,000 lb F/A	100,000 lb (50,000 kg)	20 lb (10 kg)	420 lb (189 kg)	$17,905.00

Options/Accessories

Part #	MSI Part #	Description	Est. Weight	Price
150971	503508-0001	Option kit 4260B RF modem (RF modem install for connectivity with MSI-8000 modem and rugged remote)	N/A	$210.00
139381	503208-0001	MSI-8000 RF remote display (requires MSI-4260 equipped with RF modem)	5 lb (2.25 kg)	$1,190.00
173014	N/A	RF rugged remote control (requires MSI-4260 equipped with RF modem)	N/A	$280.00
153591	N/A	MSI-8000HD Remote Display, AC power and tilt bracket option	3 lb	$1,300.00
159221	N/A	Universal crane scale transport cart	180 lb (82 kg)	$1,020.00
178004	N/A	LaserLight2, 4 in (101 mm) six-digit RF scoreboard (requires MSI-4260 equipped with RF modem)	21 lb (10 kg)	$2,135.00
178006	N/A	LaserLight2, 6 in (152 mm) six-digit RF scoreboard (requires MSI-4260 equipped with RF modem)	37 lb (17 kg)	$2,545.00
Consult	N/A	AC direct power supply		$510.00
Consult	N/A	Audible set point alarm		$375.00
Consult	N/A	Anti-heat shield		$955.00
152123	N/A	Retrofit kit 4260 to 4260B	8 lb	$2,305.00
176956	N/A	Option kit, 4260B Wi-Fi	0 lb	$415.00
Consult	N/A	Option kit, 4260B Bluetooth®	0 lb	Consult
Accessories				
150367	D00559-0004	Battery assembly, 12V rechargeable	7 lb (3 kg)	$110.00
138006	502221-0001	Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)	4 lb (2 kg)	$280.00
138007	502221-0002	Universal 115/230 VAC, 50/60 Hz battery charger (UK plug standard)	4 lb (2 kg)	$295.00
138008	502221-0003	Universal 115/230 VAC, 50/60 Hz battery charger (EC plug standard)	4 lb (2 kg)	$295.00
149549	503486-0001	Universal 115/ 230 VAC 50/60 Hz (NA plug standard) battery charger for MSI-8000 remote display	3 lb (1.4 kg)	$135.00
4260 Sub Hook with Shackle				
Consult	N/A	500 to 10,000 lb, 6.5 ton shackle		Consult
Consult	N/A	20,000 to 30,000 lb, 17 ton shackle		Consult
Consult	N/A	50,000 lb, 25 ton shackle		Consult
Consult	N/A	70,000 lb, 40 ton shackle		Consult
Consult	N/A	100,000 lb, 55 ton shackle		Consult
4260 Oversize Lifting Eye/Shackle				
Consult	N/A	500 to 10,000 lb capacity		Consult
Consult	N/A	20,000 to 30,000 lb capacity, adapter with 25 ton shackle		Consult
Consult	N/A	50,000 to 70,000 lb capacity		Consult
Consult	N/A	100,000 lb capacity		Consult

* 490% of kg capacity

** 475% of lb capacity/430% of kg capacity

*** 450% of kg capacity

NEW
MSI-4260M Port-A-Weigh

Standard Features

- IP66 cast aluminum
- Top lifting eye with lower link interface
- Five-digit, 1.75 in (44.5 mm) LCD with programmable brightness control
- Battery operated, six (6) D cell 1.5V alkaline batteries
- Meets or exceeds OSHA, ANSI, ASME and other safety design standards (5:1 Ultimate Safety Factor)
- NTEP Certified configuration

Options

(Contact MSI for application consultation)

- Rugged remote control (control for On/Off, Zero, Tare and other functions)
- RF modem install for connectivity to MSI-8000, MSI-8000HD RF, MSI-8004HD RF remote display (100 ft line of sight), TranSend and LaserLight2 remote display
- Wi-Fi and Bluetooth® communication are available for specialty applications. (Contact MSI for application consultation))

Approvals

Specifications

Accuracy:
± (0.1% +1 d) of applied load

Resolution:
Max NTEP Approved Class III: 2,500 Divisions
Max NTEP Approved Class IIIL: 5,000 Divisions
Max Non NTEP Approved: 10,000 Divisions

Enclosure:
IP66 cast aluminum

Lifting Eye, Link & Hook:
Top lifting eye with lower link interface

Design Overload:
200% Safe / 500% Ultimate

Functions:
Power: Turns unit on or off
Zero: Zeros applied load up to 100% of capacity (limited range in NTEP configurations)
Tare: Tares applied load and displays weight in Net mode
User: Programmable as test, total, unit, peak hold, net/gross, view total and print

Display:
Five-digit, 1.75 in (44.5 mm) LCD with programmable brightness control

Displayable Units:
Pounds or kilograms selectable

Annunciators:
COZ, Battery Level, Net, Total, lb/kg, Stability, RF and Setpoint LEDs

Power:
Battery operated, six (6) D cell 1.5 V alkaline batteries

Operating Time:
Up to 1,000 hours of battery life with typical use, less with RF Modem option

Operating Temperature:
Legal for Trade: 14°F to 104°F (-10°C to 40°C)
Operating: -20°F to 122°F (-28°C to 50°C)

Auto-Off Mode:
Powers off after the scale is not used for the set time (in minutes); 15, 30, 45, 60 or OFF selectable

Auto Sleep Mode:
Powers down during non-use after the set time (in minutes) and powers up with weight change or any key press; 5, 15, 30 or OFF selectable

Service Counters:
Counts number of lifts over percentage of capacity and lifts over capacity

Calibration:
Digital (procedure initiated by calibration switch)

Filtering:
OFF, LO, HI-1 or HI-2 selectable

Radio Link:
802.15.4 at 2.4 GHz

Radio Effective Range:
Typically 100-300 ft line of sight

Warranty:
One-year limited warranty

Approvals:
NTEP COC 19-122

Part Number/Price

Part #	MSI Part #	Description	Capacity	Resolution	Est. Weight	Price
194593		MSI-4260M	5,000 lb	1.0 lb (0.5 kg)	58 lb (26 kg)	$4,495.00
196908		MSI-4260M w/RF	5,000 lb	1.0 lb (0.5 kg)	58 lb (26 kg)	$4,770.00

Options/Accessories

Part #	MSI Part #	Description	Est. Weight	Price
150971	503508-0001	Option kit 4260M RF modem (RF modem install for connectivity with MSI-8000 modem and rugged remote)	N/A	$210.00
139381	503208-0001	MSI-8000 RF remote display (requires MSI-4260M equipped with RF modem)	5 lb (2.25 kg)	$1,190.00
173014	N/A	RF rugged remote control (requires MSI-4260M equipped with RF modem)	N/A	$280.00
153591	N/A	MSI-8000HD Remote Display, AC power and tilt bracket option (requires MSI-4260M equipped with RF modem)	3 lb	$1,300.00
159221	N/A	Universal crane scale transport cart	180 lb (82 kg)	$1,020.00
178004	N/A	LaserLight2, 4 in (101 mm) six-digit RF scoreboard (requires MSI-4260M equipped with RF modem)	21 lb (10 kg)	$2,135.00
178006	N/A	LaserLight2, 6 in (152 mm) six-digit RF scoreboard (requires MSI-4260M equipped with RF modem)	37 lb (17 kg)	$2,545.00
Consult	N/A	Option kit, 4260M Wi-Fi	0 lb	Consult
Consult	N/A	Option kit, 4260M Bluetooth®	0 lb	Consult

MSI-4260 IS Intrinsically Safe Crane Scale Port-A-Weigh

Standard Features

- Crane unit with five-digit, 1.2 in (30 mm) LED display
- Top lifting eye or shackle, bottom thrust bearing swivel hook
- 12 volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)

Approvals

FM APPROVED
c   us

Ex

CE
Pending

Specifications

Accuracy:
± (0.1% +1 d) of applied load

Resolution:
3,000 to 5,000 d standard (up to 10,000 d available)

Enclosure:
NEMA Type 4, IP66 marine grade 356 alloy anodized cast aluminum

Instrinsic Safety:
US Listings
FM16US0156X
IS / I, II, III / 1 / CDEFG / T4 Ta = -20°C to 50°C
I / 0 / AEx ia / IIB / T4 Ta = -20°C to 50°C Ga
20 / AEx ia / IIIC / T135°C Ta = -20°C to 50°C Da
Canadian Listings
FM16CA0092X
IS / I / 1 / CD / T4 Ta = -10°C to 50°C
IS / II, III / 1 / EFG / T4 Ta = -10°C to 50°C
I / 0 / Ex ia / IIB / T4 Ta = -10°C to 50°C Ga
20 / Ex ia / IIIC / T135°C Ta = -10°C to 50°C Da
ATEX Listings
FM16ATEX0038X
II 1 G Ex ia IIB T4 Ga -10°C ≤ Ta ≤ 50°C
II 1 D Ex ia IIIC T135°C Da -10°C ≤ Ta ≤ 50°C

Lifting Eye, Shackle & Hook:
Crosby® or equal with 360° thrust-bearing swivel hook

Design Overload:
200% Safe / 500% Ultimate (except where noted)

Functions:
Power: Turns unit on or off
Zero: Zeros applied load up to 100% of capacity (limited range in NTEP Certified configuration)
Tare: Tares applied load and displays weight in Net mode F1: Programmable as test, units, net/gross, total and peak hold

Display:
Five-digit, 1.2 in (30 mm) LED with programmable brightness control

Displayable Units:
Pounds or kilograms selectable

Annunciators:
COZ, Net, Gross, Total, Peak, Low Battery, lb/kg, Motion, Setpoints

Power:
12 volt rechargeable battery.
115/230 VAC approved battery charger is included

Operating Time:
Up to 200 hours between charging with typical use

Auto-Off Mode:
Select for 15, 30, 45 minutes, 1 hour or Off

Auto Sleep Mode:
Power down during non-use and power up with weight change or any key press

Service Counters:
Counts number of lifts over percentage of capacity and lifts over capacity

Calibration:
Digital

Filtering:
OFF, LO, HI-1, HI-2 selectable

Warranty:
One-year limited warranty

Approvals:
NTEP CC 19-122

MSI-4260 IS Intrinsically Safe Crane Scale Port-A-Weigh

Part Number/Price

Part #	Description	Capacity	Resolution	Price
156013	500LB, Swivel Hook	500 lb (250 kg)	0.2 lb (0.1 kg)	$5,995.00
156014	2K, Swivel Hook	2,000 lb (1,000 kg)	1.0 lb (0.5 kg)	$5,995.00
156015	5K, Swivel Hook	5,000 lb (2,500 kg)	1.0 lb (0.5 kg)	$5,995.00
156016	10K, Swivel Hook	10,000 lb (5,000 kg)	2.0 lb (1.0 kg)	$5,995.00
156017	20K, Swivel Hook	20,000 lb (10,000 kg)	5.0 lb (2.0 kg)	$7,595.00
156018	30K, Swivel Hook	30,000 lb (15,000 kg)	10 lb (5.0 kg)	$7,595.00
156019	50K, Swivel Hook	50,000 lb (25,000 kg)	10 lb (5.0 kg)	$10,995.00
156020	70K, Swivel Hook	70,000 lb (35,000 kg)	20 lb (10 kg)	$12,995.00
156021	100K, Swivel Hook	100,000 lb (50,000 kg)	20 lb (10 kg)	$19,995.00

Options/Accessories

Part #	Description	Price
170606	Battery Charger	$275.00
167777	Spare Battery	$245.00

MSI-4300 Port-A-Weigh Plus

Contact MSI for application consultation

Standard Features

- Crane scale unit with six-digit, 1.6 in (40 mm), backlight LCD display
- Top lifting eye or shackle, bottom thrust bearing swivel hook
- 12 volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)
- Meets or exceeds OSHA, ANSI, ASME and other safety design standards (5:1 Ultimate Safety Factor)
- NTEP Certified configuration

Options

- D-cell battery option, provides up to 2,000 hours of operation
- Substitute bottom swivel hook with shackle
- Oversized top-lifting eye or shackle
- Oversized bottom hook
- Universal direct power supply; 85-265 VAC, 47-440 Hz /130-300 VDC
- Low headroom top adapter
- Audible setpoint alarm
- Custom top and bottom interfaces
- Crane scale cart

Approvals

NTEP

Measurement
Canada
Approved

Optional crane scale cart

Specifications

Accuracy:
±0.1% +1 d of applied load

Resolution:
3,000 to 5,000 d standard (Up to 10,000 d available)

Enclosure:
NEMA Type 4, IP66, marine grade 356 alloy anodized cast aluminum

Top Lifting Eye, Shackle & Hook:
Crosby® or equal with 360° thrust-bearing swivel hook

Design Overload:
200% Safe / 500% Ultimate (except where noted)

Functions:
Power, zero, net/gross, tare and programmable test/user

Display:
6 digit, 1.6 in (40 mm) LCD (upper) 8 digit, 0.8 in (20 mm) LCD (lower) with adjustable display contrast

Displayable Units:
Pounds, kilograms, tons, and metric tons selectable

Power:
12 V rechargeable battery. 115/230 VAC battery charger included

Operating Time:
300 hours with typical use

Operating Temperature:
5°F to 122°F (-15°C to 50°C)

Filtering:
OFF, LO, Medium and HI selectable

Warranty:
One-year limited

Approvals:
NTEP CC 92-176 - 5,000 lb (2,500 kg)
Measurement Canada AM-4984

Part Number/Price

Part #	MSI Part #	Description	Capacity	Resolution	Est. Weight	Price
138825	502666-0013	MSI-4300 500 lb F/A	500 lb (250 kg)	0.2 lb (0.1 kg)	53 lb (24 kg)	$4,740.00
138826	502666-0014	MSI-4300 2,000 lb F/A	2,000 lb (1000 kg)	1.0 lb (0.5 kg)	53 lb (24 kg)	$4,740.00
138827	502666-0015	MSI-4300 5,000 lb F/A	5,000 lb (2500 kg)	1.0 lb (0.5 kg)	62 lb (28 kg)	$4,860.00
138828	502666-0016	MSI-4300 10,000 lb F/A	10,000 lb (5000 kg)	2.0 lb (1.0 kg)	62 lb (28 kg)	$5,110.00
138069	502235-0032	MSI-4300 20,000 lb F/A	20,000 lb (10,000 kg)	5.0 lb (2.0 kg)	105 lb (47 kg)	$6,380.00
138070	502235-0033	MSI-4300 30,000 lb F/A	30,000 lb (15,000 kg)	10 lb (5.0 kg)	125 lb (55 kg)	$6,705.00
138071*	502235-0034	MSI-4300 50,000 lb F/A	50,000 lb (25,000 kg)	10 lb (5.0 kg)	235 lb (106 kg)	$9,390.00
138072**	502235-0035	MSI-4300 70,000 lb F/A	70,000 lb (35,000 kg)	20 lb (10 kg)	270 lb (121 kg)	$11,595.00
138073***	502235-0036	MSI-4300 100,000 lb F/A	100,000 lb (50,000 kg)	20 lb (10 kg)	420 lb (189 kg)	$18,980.00

Options/Accessories

Part #	MSI Part #	Description	Est. Weight	Price
159221	N/A	Universal crane scale transport cart	180 lb (82 kg)	$1,020.00
Consult	N/A	Audible set point alarm		$380.00
Consult	N/A	AC power supply		$510.00
Consult	N/A	D cell battery option		Consult
Accessories				
150367	D00559-0004	Battery assembly, 12 volt rechargeable	7 lb (3 kg)	$110.00
138006	502221-0001	Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)	4 lb (2 kg)	$280.00
138007	502221-0002	Universal 115/230 VAC, 50/60 Hz battery charger (UK plug standard)	4 lb (2 kg)	$295.00
138008	502221-0003	Universal 115/230 VAC, 50/60 Hz battery charger (EC plug standard)	4 lb (2 kg)	$295.00
4300 Sub Hook with Shackle				
Consult	N/A	500 to 10,000 lb, 6.5 ton shackle		Consult
Consult	N/A	20,000 to 30,000 lb, 17 ton shackle		Consult
Consult	N/A	50,000 lb, 25 ton shackle		Consult
Consult	N/A	70,000 lb, 40 ton shackle		Consult
Consult	N/A	100,000 lb, 55 ton shackle		Consult
4300 Oversize Lifting Eye/Shackle				
Consult	N/A	500 to 10,000 lb capacity		Consult
Consult	N/A	20,000 to 30,000 lb capacity, adapter with 25 ton shackle		Consult
Consult	N/A	50,000 to 70,000 lb capacity		Consult
Consult	N/A	100,000 lb capacity		Consult

490% of kg capacity

*** 475% of lb capacity/430% of kg capacity**

**** 450% of kg capacity***

RICE LAKE

MSI-9300 Port-A-Weigh Plus CellScale™ RF

Contact MSI for application consultation

Standard Features

- Crane unit with 2.4 GHz Spread Spectrum transceiver
- Six-digit, 1.2 in (30 mm) LED display and annunciators
- Top lifting eye or shackle, bottom thrust bearing swivel hook
- 12 volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA Plug Standard)
- NTEP Certified Configuration

Options

(Contact MSI for application consultation)

- RF remote crane unit control, includes On/Off, Zero, Tare, Net/Gross, Total and programmable function keys
- Audible alarm
- Anti-heat shielding for high-temperature applications
- Substitute bottom swivel hook with shackle
- Low headroom top adapter
- Oversized top lifting eye or shackle
- Oversized bottom hook
- Universal direct power supply; 85-265 VAC, 47-440 Hz / 130-300 VDC
- Wireless 802.11 b/g Ethernet connectivity
- MSI-9300 retrofit kit - conversion kit to upgrade existing MSI-4300 crane scale to 9300 RF unit
- Custom top and bottom interfaces
- Potential receivers: MSI-9850, 9750A, remote RF Indicators (each sold separately)
- Crane scale cart

Optional crane scale cart

Approvals

NTEP

Specifications

Accuracy:
± 0.1% +1 d of applied load

Resolution:
3,000 to 5,000 d standard (Up to 10,000 d available)

Enclosure:
NEMA Type 4, IP66, marine grade 356 alloy anodized cast aluminum

Lifting Eye, Shackle & Hook:
Crosby® or equal with 360º thrust-bearing swivel hook.

Design Overload:
200% Safe / 500% Ultimate (except where noted)

Functions:
POWER, ZERO, NET/GROSS, TARE and Programmable TEST/USER

Display:
Six digit, 1.2 in (30 mm) LED with 14 feature annunciators and programmable brightness control

Displayable Units:
Pounds or kilograms selectable

Power:
12 V rechargeable battery, 115-230 VAC battery charger included

Operating Time:
Up to 30 hours between charging with typical use

Operating Temperature:
-4ºF to 140ºF (-20ºC to 60ºC)

Calibration:
Digital via MSI-9750A or MSI-9850 RF indicators or via serial interface with PC terminal program

Filtering:
LO, Medium and HI selectable

Radio Link:
FHSS at 2.4 GHz

Radio Effective Range:
Typically 500 ft (150 m) indoor, 1000 ft (300 m) outdoor with standard antennas

Approvals:
NTEP CC 07-007; 5,000 - 70,000 lb (2,500 - 35,000 kg capacities)

Warranty:
One-year limited warranty

MSI-9300 Port-A-Weigh Plus CellScale™ RF

Part Number/Price

Part #	MSI Part #	Description	Capacity	Resolution	Est. Weight	Price
138704	502654-0001	MSI-9300 500 lb F/A	500 lb (250 kg)	0.2 lb (0.1 kg)	53 lb (24 kg)	$6,485.00
138705	502654-0002	MSI-9300 2,000 lb F/A	2,000 lb (1,000 kg)	1.0 lb (0.5 kg)	53 lb (24 kg)	$6,175.00
138706	502654-0003	MSI-9300 5,000 lb F/A	5,000 lb (2,500 kg)	1.0 lb (0.5 kg)	62 lb (28 kg)	$6,285.00
138707	502654-0004	MSI-9300 10,000 lb F/A	10,000 lb (5,000 kg)	2.0 lb (1.0 kg)	62 lb (28 kg)	$6,840.00
138409	502518-0005	MSI-9300 20,000 lb F/A	20,000 lb (10,000 kg)	5.0 lb (2.0 kg)	105 lb (47 kg)	$8,105.00
138410	502518-0006	MSI-9300 30,000 lb F/A	30,000 lb (15,000 kg)	10 lb (5.0 kg)	125 lb (55 kg)	$8,465.00
138419*	502518-0015	MSI-9300 50,000 lb F/A	50,000 lb (25,000 kg)	10 lb (5.0 kg)	235 lb (106 kg)	$11,115.00
138420**	502518-0016	MSI-9300 70,000 lb F/A	70,000 lb (35,000 kg)	20 lb (10 kg)	270 lb (121 kg)	$13,330.00
138421***	502518-0017	MSI-9300 100,000 lb F/A	100,000 lb (50,000 kg)	20 lb (10 kg)	420 lb (189 kg)	$20,740.00

Options/Accessories

Part #	MSI Part #	Description	Est. Weight	Price
159625	N/A	MSI-9850 RF remote indicator (wall or desk mount)	10 lb (5 kg)	$2,640.00
138486	502541-0001	MSI-9750 RF portable indicator	2 lb (1 kg)	$1,980.00
139056	N/A	4 in (101 mm) six-digit RF scoreboard	21 lb (10 kg)	$3,100.00
139052	N/A	6 in (152 mm) six-digit RF scoreboard	37 lb (17 kg)	$3,845.00
138341	502488-0001	Universal mounting bracket for MSI-9850 RF remote indicator	2 lb (1 kg)	$140.00
159221	N/A	Universal crane scale transport cart	180 lb (82 kg)	$1,020.00
138298	502434-0001	RF remote controller	1 lb	$325.00
138317	502452-0001	Spare RF remote	1 lb	$115.00
Consult	N/A	AC power supply		$510.00
Consult	N/A	Anti-heat shield		$960.00
Consult	N/A	Audible alarm		$380.00
Consult	N/A	Wi-Fi Ethernet option		$375.00
138452	502520-0001	Retrofit kit 4300 D cell to 9300 12 Volt	1 lb	$4,555.00
138453	502520-0002	Retrofit kit 4300 D cell to 9300 no modem	1 lb	$3,615.00
138454	502520-0003	Retrofit kit 4300 to 9300	1 lb	$4,120.00
138455	502520-0004	Retrofit kit 4300 to 9300 no modem	1 lb	$3,090.00
9300 Sub Hook with Shackle				
Consult	N/A	500 to 10,000 lb, 6.5 ton shackle		Consult
Consult	N/A	20,000 to 30,000 lb, 17 ton shackle		Consult
Consult	N/A	50,000 lb, 25 ton shackle		Consult
Consult	N/A	70,000 lb, 40 ton shackle		Consult
Consult	N/A	100,000 lb, 55 ton shackle		Consult
9300 Oversize Lifting Eye/Shackle				
Consult	N/A	500 to 10,000 lb capacity		Consult
Consult	N/A	20,000 to 30,000 lb capacity, adapter with 25 ton shackle		Consult
Consult	N/A	50,000 to 70,000 lb capacity		Consult
Consult	N/A	100,000 lb capacity		Consult
Accessories				
150367	D00559-0004	Battery assembly, 12 volt rechargeable	7 lb (3 kg)	$110.00
148624	501705-0001	RS-232/RS-485 serial cable	1 lb (0.45 kg)	$115.00
138006	502221-0001	Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)	4 lb (2 kg)	$280.00
138007	502221-0002	Universal 115/230 VAC, 50/60 Hz battery charger (UK plug standard)	4 lb (2 kg)	$295.00
138008	502221-0003	Universal 115/230 VAC, 50/60 Hz battery charger (EC plug standard)	4 lb (2 kg)	$295.00

*490% of kg capacity

** 475% of lb capacity/430% of kg capacity

*** 450% of kg capacity

MSI-9300HT Hi-Torque Port-A-Weigh Plus CellScale™ RF

Contact MSI for application consultation

Standard Features

- Crane unit with 2.4 GHz spread spectrum transceiver
- Six-digit, 30 mm (1.2 in) LED display and annunciators
- Top shackle (sold separately), bottom thrust bearing swivel hook
- 12 volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)
- Hi-torque load train designed for use with powered rotation

Options

(Contact MSI for application consultation)

- RF remote crane unit control, includes On/Off, Zero, Tare, Net/Gross, Total and programmable function keys
- Anti-heat shielding for high-temperature applications
- Substitute bottom swivel hook with shackle
- Oversized top or shackle
- Oversized bottom hooks
- Universal direct power supply; 85-265 VAC, 47-440 Hz / 130-300 VDC
- Wireless 802.11 b/g Ethernet connectivity
- Low headroom top adaptor
- Top shackle
- Audible alarm
- Custom top and bottom interfaces
- Potential receivers: MSI-9850, 9750A, remote RF Indicators (each sold separately)

Specifications

Accuracy:
± 0.1% +1 d of capacity

Resolution:
3000 to 5000 d standard (Up to 10,000 d available)

Enclosure:
NEMA Type 4, IP66, marine grade 356 alloy anodized cast aluminum

Lifting Eye, Shackle & Hook:
Shackle is optional and Crosby fixed hook provided as standard.

Design Overload:
200% Safe / 500% Ultimate

Functions:
POWER, ZERO, NET/GROSS, TARE and Programmable TEST/USER

Display:
6 digit, 1.2 in (30 mm) LED with 14 feature annunciators and programmable brightness control

Displayable Units:
Pounds or kilograms selectable

Power:
12 Volt rechargeable battery, 115-230 VAC battery charger included

Operating Time:
Up to 30 hours between charging with typical use

Operating Temperature:
-4ºF to 140ºF (-20ºC to 60ºC)

Calibration:
Digital via MSI-9750A or MSI-9850 RF indicators or via serial interface with PC terminal program.

Filtering:
LO, Medium and HI selectable

Radio Link:
FHSS at 2.4 GHz

Radio Effective Range:
Typically 500 ft (150 m) indoor, 1000 ft (300 m) outdoor with standard antennas.

Warranty:
One-year limited

MSI-9300HT Hi-Torque Port-A-Weigh Plus CellScale™ RF

Part Number/Price

Part #	MSI Part #	Description	Capacity	Resolution	Est. Weight	Price
138440	502519-0001	MSI-9300HT 30,000 lb F/A	30,000 lb (15,000 kg)	10 lb (5.0 kg)	125 lb (55 kg)	$14,595.00
138441	502519-0002	MSI-9300HT 70,000 lb F/A	70,000 lb (35,000 kg)	20 lb (10 kg)	270 lb (121 kg)	Consult
162377	N/A	MSI-9300HT 120,000 lb F/A	120,000 lb (60,000 kg)	50 lb (20 kg)	550 lb (250 kg)	Consult

Options/Accessories

Part #	MSI Part #	Description	Est. Weight	Price
141992	10539	Top lifting shackle Crosby® G2130 17 ton for 30,000 lb cap unit	19.5 lb (8.9 kg)	Consult
146335	23650-0040	Top lifting shackle Crosby® G2140 40 ton for 70,000 lb cap unit	34 lb (15 kg)	Consult
146336	23650-0050	Top lifting shackle Crosby® G2140 55 ton* for 120,000 lb cap unit	104 lb (47 kg)	Consult
159625	N/A	MSI-9850 RF remote indicator (wall or desk mount)	10 lb (5 kg)	$2,640.00
138486	502541-0001	MSI-9750 RF portable Indicator	2.2 lb (1 kg)	$1,980.00
139056	N/A	4 in (101 mm) six-digit RF scoreboard	21 lb (10 kg)	$3,100.00
139052	N/A	6 in (152 mm) six-digit RF scoreboard	37 lb (17 kg)	$3,845.00
138341	502488-0001	Universal mounting bracket for MSI-9850 RF remote indicator	2.2 lb (1 kg)	$140.00
159221	N/A	Universal crane scale transport cart	180 lb (82 kg)	$1,020.00
138298	502434-0001	RF remote controller	1 lb (0.45 kg)	$325.00
138317	502452-0001	Spare RF remote	1 lb (0.45 kg)	$115.00
Consult	N/A	AC direct power supply		$510.00
Consult	N/A	Anti-heat shield		$960.00
Consult	N/A	Audible alarm		$380.00
Consult	N/A	Wi-Fi Ethernet option		$375.00
Accessories				
148624	501705-0001	RS-232/RS-485 serial cable	1 lb (0.45 kg)	$115.00
150367	D00559-0004	Battery assembly, 12 volt rechargeable	6.6 lb (3 kg)	$110.00
138006	502221-0001	Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)	4 lb (2 kg)	$280.00
138007	502221-0002	Universal 115/230 VAC, 50/60 Hz battery charger (UK plug standard)	4 lb (2 kg)	$295.00
138008	502221-0003	Universal 115/230 VAC, 50/60 Hz battery charger (EC plug standard)	4 lb (2 kg)	$295.00

* 55 Metric Tons = 121,254 lbs

CRANE SCALES

www.ricelake.com | Phone: 800-472-6703

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MSI-6260CS Trans-Weigh CellScale™ RF

Contact MSI for application consultation

Standard Features

- Crane unit with 2.4 GHz spread spectrum transceiver
- Top lifting eye or shackle, bottom thrust bearing swivel hook
- 12 volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA Plug Standard)
- Meets or exceeds OSHA, ANSI, ASME and other safety design standards (5:1 Ultimate Safety Factor)
- NTEP Certified configuration

Approvals

Options

- ScaleCore configurations available
- Anti-heat shielding for high-temperature applications
- Substitute bottom swivel hook with shackle
- Oversized top lifting eye or shackle
- Oversized bottom hook
- Low headroom top adaptor
- Universal direct power supply; 85-265 VAC, 47-440 Hz / 130-300 VDC
- Wireless 802.11 b/g Ethernet connectivity
- MSI-6260CS retrofit kit - conversion kit to upgrade existing MSI-4260 crane scales to MSI-6260CS
- Custom top and bottom interfaces
- Potential receivers: MSI-9850, MSI-9750A, Scoreboard, TranSend
- Crane scale cart

Optional crane scale cart

Specifications

Accuracy:
± (0.1% +1 d) of applied load

Resolution:
3,000 to 5,000 d standard (Up to 10,000 d available)

Enclosure:
NEMA Type 4, IP66, marine grade 356 alloy anodized cast aluminum

Lifting Eye, Shackle & Hook:
Crosby® or equivalent with 360° thrust-bearing swivel hook

Design Overload:
200% Safe / 500% Ultimate (except where noted)

Functions:
POWER On/Off (all other scale functions are controlled from other optional networked MSI scale indicators MSI-9850 and/or MSI-9750A)

Displayable Units:
Pounds or kilograms selectable

Power:
12 Volt rechargeable battery, 115/230 VAC battery charger included

Operating Time:
Up to 40 hours between charging with typical use

Operating Temperature:
-4ºF to 140ºF (-20ºC to 60ºC)

Calibration:
Digital via MSI-9750A or MSI-9850 RF indicators or via serial interface with PC terminal program

Radio Link:
FHSS at 2.4 GHz

Radio Link Effective Range:
Typically 500 ft (150 m) indoor, 1000 ft (300 m) outdoor with standard antennas

Warranty:
One-year limited

Approvals:
NTEP CC 07-007: 5,000 to 70,000 lb (2,500 kg to 35,000 kg)

CRANE SCALES

Part Number/Price

Part #	MSI Part #	Description	Capacity	Resolution	Est. Weight	Price
138729	502655-0001	MSI-6260 500 lb F/A	500 lb (250 kg)	0.2 lb (0.1 kg)	53 lb (24 kg)	$5,180.00
138730	502655-0002	MSI-6260 2,000 lb F/A	2,000 lb (1000 kg)	1.0 lb (0.5 kg)	53 lb (24 kg)	$5,180.00
138731	502655-0003	MSI-6260 5,000 lb F/A	5,000 lb (2500 kg)	1.0 lb (0.5 kg)	62 lb (28 kg)	$5,285.00
138732	502655-0004	MSI-6260 10,000 lb F/A	10,000 lb (5000 kg)	2.0 lb (1.0 kg)	62 lb (28 kg)	$5,250.00
138506	502559-0005	MSI-6260 20,000 lb F/A	20,000 lb (10,000 kg)	5.0 lb (2.0 kg)	105 lb (47 kg)	$6,720.00
138507	502559-0006	MSI-6260 30,000 lb F/A	30,000 lb (15,000 kg)	10 lb (5.0 kg)	125 lb (55 kg)	$7,050.00
138508*	502559-0007	MSI-6260 50,000 lb F/A	50,000 lb (25,000 kg)	10 lb (5.0 kg)	235 lb (106 kg)	$9,590.00
138509**	502559-0008	MSI-6260 70,000 lb F/A	70,000 lb (35,000 kg)	20 lb (10 kg)	270 lb (121 kg)	$11,685.00
138510***	502559-0009	MSI-6260 100,000 lb F/A	100,000 lb (50,000 kg)	20 lb (10 kg)	420 lb (189 kg)	$18,725.00

Options/Accessories

Part #	MSI Part #	Description	Est. Weight	Price
159625	N/A	MSI-9850 RF remote indicator (wall or desk mount)	10 lb (5 kg)	$2,640.00
138486	502541-0001	MSI-9750 RF portable indicator	2.2 lb (1 kg)	$1,980.00
138341	502488-0001	Universal mounting bracket for MSI-9850 RF remote indicator	2.2 lb (1 kg)	$140.00
159221	N/A	Universal crane scale transport cart	180 lb (82 kg)	$1,020.00
139056	N/A	4 in (101 mm) six-digit RF scoreboard	21 lb (10 kg)	$3,100.00
139052	N/A	6 in (152 mm) six-digit RF scoreboard	37 lb (17 kg)	$3,845.00
Consult	N/A	AC power supply		$510.00
Consult	N/A	Anti-heat shield		$960.00
Consult	N/A	Audible alarm		$380.00
Consult	N/A	Wi-Fi Ethernet option		$375.00
138575	N/A	Retrofit kit 4260 to 6260 CS	1 lb (0.45 kg)	$2,830.00
6260 Sub Hook with Shackle				
Consult	N/A	500 to 10,000 lb, 6.5 ton shackle		Consult
Consult	N/A	20,000 to 30,000 lb, 17 ton shackle		Consult
Consult	N/A	50,000 lb, 25 ton shackle		Consult
Consult	N/A	70,000 lb, 40 ton shackle		Consult
Consult	N/A	100,000 lb, 55 ton shackle		Consult
6260 Oversize Lifting Eye/Shackle				
Consult	N/A	500 to 10,000 lb capacity		Consult
Consult	N/A	20,000 to 30,000 lb capacity, adapter with 25 ton shackle		Consult
Consult	N/A	50,000 to 70,000 lb capacity		Consult
Consult	N/A	100,000 lb capacity		Consult
Accessories				
148624	501705-0001	RS-232/RS-485 serial cable	1 lb (0.45 kg)	$115.00
150367	D00559-0004	Battery assembly, 12 volt rechargeable	6.6 lb (3 kg)	$110.00
138006	502221-0001	Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)	4 lb (2 kg)	$280.00
138007	502221-0002	Universal 115/230 VAC, 50/60 Hz battery charger (UK plug standard)	4 lb (2 kg)	$295.00
138008	502221-0003	Universal 115/230 VAC, 50/60 Hz battery charger (EC plug standard)	4 lb (2 kg)	$295.00

* 490% of kg capacity

** 475% of lb capacity/430% of kg capacity

*** 450% of kg capacity

Phone: 800-472-6703

www.ricelake.com

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MSI-7300 Dyna-Link 2
Digital Tension Dynamometer

Shown with optional shackles

Contact MSI for application consultation

Standard Features

- Tension dynamometer with 6-digit, 1.00 in (25.4 mm) LCD display
- Two C alkaline batteries for capacities up to 10,000 lb (5,000 kg)
- Two D alkaline batteries for capacities 25,000 lb (12,500 kg) and above

Additional Options

(Contact MSI for application consultation)

- Crosby® top and bottom shackles
- Portable transport case
- Serial output cable
- Rugged remote control (control for Off, Zero, Tare and other functions)
- RF modem install for connectivity to MSI-8000, MSI-8000HD RF, MSI-8004HD RF remote display (100 ft line of sight) and TranSend
- Heavy capacity configurations (60 to 275 Ton)
- Audible alarm
- Wi-Fi or Bluetooth® communications are available for specialty applications. (Contact MSI for application consultation)

Specifications

Accuracy:
0.1% FS of rated capacity (up to 50 ton)
0.5% FS of rated capacity (50 ton and above)

Enclosure:
NEMA Type 4, IP65, anodized corrosion-resistant finish

Material:
2024 aircraft grade aluminum
Capacities above 100 K have zinc plated enclosures and 4340 load cell bodies

Design Overload:
200% Safe/700% Ultimate* (except where noted)

Functions:
On/Off, Zero, Hi-Speed Peak Hold, Setpoints, Total, Tare, Auto-Off, Motion Filter

Display:
6 digit, 1.00 in (25.4 mm) LCD

Displayable Units:
Pounds, kilograms, kilonewtons, tons, metric tons

LED Annunciators:
Function 1, Function 2, Setpoint 1, Setpoint 2

LCD Annunciators:
Net, Center of Zero, Stable, Battery Test, Peak Hold, Total

Power:
Two each C alkaline batteries for capacities up to 10,000 lb two each D alkaline batteries for capacities 25,000 lb–100,000 lb

Operating Time:
From 150 to 300 hours in typical use depending on unit capacity and battery configuration. Approximately 25 to 30 hours with optional RF modem link installed.

Operating Temperature:
- 4°F to 140°F (-20°C to 60°C)

Calibration:
Digital

Filtering:
OFF, LO, HI selectable

Data Output:
Serial RS-232

Warranty:
Two-year limited

Part Number/Price

Part #	MSI Part #	Description	Capacity	Resolution	Est. Weight	Price
139162	502967-0001	MSI-7300 1,000 lb F/A	1,000 lb (500 kg)	0.5 lb (0.2 kg)	8 lb (3.6 kg)	$1,455.00
139163	502967-0002	MSI-7300 2,500 lb F/A	2,500 lb (1,250 kg)	1 lb (0.5 kg)	9 lb (4.0 kg)	$1,455.00
139164	502967-0003	MSI-7300 5,000 lb F/A	5,000 lb (2,500 kg)	2 lb (1.0 kg)	9 lb (4.0 kg)	$1,455.00
139165	502967-0004	MSI-7300 10,000 lb F/A	10,000 lb (5,000 kg)	5 lb (2.0 kg)	11 lb (5.0 kg)	$1,555.00
139166	502967-0005	MSI-7300 25,000 lb F/A	25,000 lb (12,500 kg)	10 lb (5 kg)	19 lb (8.6 kg)	$2,090.00
139167	502967-0006	MSI-7300 50,000 lb F/A	50,000 lb (25,000 kg)	20 lb (10 kg)	29 lb (13 kg)	$2,705.00
139168*	502967-0007	MSI-7300 100,000 lb F/A	100,000 lb (50,000 kg)	50 lb (20 kg)	65 lb (30 kg)	$3,535.00
Optional Configurations (for connectivity to MSI-8000 RF Remote Display) F/A						
139441	503381-0001	MSI-7300 RF module	1,000 lb (500 kg)	0.5 lb (.2 kg)	8 lb (3.6 kg)	$1,635.00
139442	503381-0002	MSI-7300 RF module	2,500 lb (1,250 kg)	1 lb (.5 kg)	9 lb (4 kg)	$1,635.00
139443	503381-0003	MSI-7300 RF module	5,000 lb (2,500 kg)	2 lb (1 kg)	9 lb (4 kg)	$1,635.00
139444	503381-0004	MSI-7300 RF module	10,000 lb (5,000 kg)	5 lb (2 kg)	11 lb (5 kg)	$1,740.00
139445	503381-0005	MSI-7300 RF module	25,000 lb (12,500 kg)	10 lb (5 kg)	19 lb (8.6 kg)	$2,260.00
139446	503381-0006	MSI-7300 RF module	50,000 lb (25,000 kg)	20 lb (10 kg)	29 lb (13 kg)	$2,880.00
139447*	503381-0007	MSI-7300 RF module	100,000 lb (50,000 kg)	50 lb (20 kg)	65 lb (30 kg)	$3,720.00
159168*	N/A	MSI-7300 RF module includes MSI-8000	120,000 lb (60,000 kg)	50 lb (20 kg)	57 lb (26 kg)	$4,785.00
159169*	N/A	MSI-7300 RF module includes MSI-8000	180,000 lb (90,000 kg)	100 lb (50 kg)	74 lb (36 kg)	$7,280.00
159170*	N/A	MSI-7300 RF module includes MSI-8000	260,000 lb (130,000 kg)	100 lb (50 kg)	100 lb (45 kg)	$9,740.00
159171*	N/A	MSI-7300 RF module includes MSI-8000	380,000 lb (190,000 kg)	200 lb (100 kg)	169 lb (77 kg)	$11,025.00
159172**	N/A	MSI-7300 RF module includes MSI-8000	550,000 lb (275,000 kg)	200 lb (100 kg)	336 lb (152 kg)	$20,800.00

MSI-7300 Dyna-Link 2
Digital Tension Dynamometer

Part Number/Price

Part #	MSI Part #	Description	Capacity	Resolution	Est. Weight	Price
176806	N/A	MSI-7300 1,000 lb F/A with Bluetooth® ***	1,000 lb (500 kg)	0.5 lb (0.2 kg)	8 lb (3.6 kg)	Consult
176807	N/A	MSI-7300 2,500 lb F/A with Bluetooth® ***	2,500 lb (1,250 kg)	1 lb (0.5 kg)	9 lb (4.0 kg)	Consult
176808	N/A	MSI-7300 5,000 lb F/A with Bluetooth® ***	5,000 lb (2,500 kg)	2 lb (1.0 kg)	9 lb (4.0 kg)	Consult
176809	N/A	MSI-7300 10,000 lb F/A with Bluetooth® ***	10,000 lb (5,000 kg)	5 lb (2.0 kg)	11 lb (5.0 kg)	Consult
176810	N/A	MSI-7300 25,000 lb F/A with Bluetooth® ***	25,000 lb (12,500 kg)	10 lb (5 kg)	19 lb (8.6 kg)	Consult
176811	N/A	MSI-7300 50,000 lb F/A with Bluetooth® ***	50,000 lb (25,000 kg)	20 lb (10 kg)	29 lb (13 kg)	Consult
176812	N/A	MSI-7300 100,000 lb F/A with Bluetooth® ***	100,000 lb (50,000 kg)	50 lb (20 kg)	65 lb (30 kg)	Consult
176822*	N/A	MSI-7300 120,000 lb F/A with Bluetooth® ***	120,000 lb (60,000 kg)	50 lb (20 kg)	57 lb (26 kg)	Consult
176823	N/A	MSI-7300 180,000 lb F/A with Bluetooth® ***	180,000 lb (90,000 kg)	100 lb (50 kg)	74 lb (36 kg)	Consult
176824	N/A	MSI-7300 260,000 lb F/A with Bluetooth® ***	260,000 lb (130,000 kg)	100 lb (50 kg)	100 lb (45 kg)	Consult
176825	N/A	MSI-7300 380,000 lb F/A with Bluetooth® ***	380,000 lb (190,000 kg)	200 lb (100 kg)	169 lb (77 kg)	Consult
176826**	N/A	MSI-7300 550,000 lb F/A with Bluetooth® ***	550,000 lb (275,000 kg)	200 lb (100 kg)	336 lb (152 kg)	Consult
176813	N/A	MSI-7300 1,000 lb F/A with Wi-Fi	1,000 lb (500 kg)	0.5 lb (0.2 kg)	8 lb (3.6 kg)	$1,660.00
176814	N/A	MSI-7300 2,500 lb F/A with Wi-Fi	2,500 lb (1,250 kg)	1 lb (0.5 kg)	9 lb (4.0 kg)	$1,660.00
176815	N/A	MSI-7300 5,000 lb F/A with Wi-Fi	5,000 lb (2,500 kg)	2 lb (1.0 kg)	9 lb (4.0 kg)	$1,660.00
176816	N/A	MSI-7300 10,000 lb F/A with Wi-Fi	10,000 lb (5,000 kg)	5 lb (2.0 kg)	11 lb (5.0 kg)	$1,775.00
176817	N/A	MSI-7300 25,000 lb F/A with Wi-Fi	25,000 lb (12,500 kg)	10 lb (5 kg)	19 lb (8.6 kg)	$2,300.00
176818	N/A	MSI-7300 50,000 lb F/A with Wi-Fi	50,000 lb (25,000 kg)	20 lb (10 kg)	29 lb (13 kg)	$3,010.00
176819	N/A	MSI-7300 100,000 lb F/A with Wi-Fi	100,000 lb (50,000 kg)	50 lb (20 kg)	65 lb (30 kg)	$3,790.00
176827	N/A	MSI-7300 120,000 lb F/A with Wi-Fi	120,000 lb (60,000 kg)	50 lb (20 kg)	57 lb (26 kg)	$4,870.00
176828	N/A	MSI-7300 180,000 lb F/A with Wi-Fi	180,000 lb (90,000 kg)	100 lb (50 kg)	74 lb (36 kg)	$7,420.00
176829	N/A	MSI-7300 260,000 lb F/A with Wi-Fi	260,000 lb (130,000 kg)	100 lb (50 kg)	100 lb (45 kg)	$9,920.00
176830	N/A	MSI-7300 380,000 lb F/A with Wi-Fi	380,000 lb (190,000 kg)	200 lb (100 kg)	169 lb (77 kg)	$11,245.00
176831	N/A	MSI-7300 550,000 lb F/A with Wi-Fi	550,000 lb (275,000 kg)	200 lb (100 kg)	336 lb (152 kg)	$20,800.00

*500% Ultimate overload

**440% Ultimate overload

*** Bluetooth modems only work with certain Android devices. Please contact MSI for potential applications.

Options/Accessories

Part #	MSI Part #	Description	Est. Weight	Price
151357	10541	Shackle anchor, bolt type 3.25 ton for 500 lb–5,000 lb unit	3 lb (1.4 kg)/pair	Consult
151355	10538	Shackle anchor, bolt type 6.5 ton for 10,000 lb unit	6 lb (2.7 kg)/pair	Consult
141992	10539	Shackle anchor, bolt type 17 ton for 25,000 lb unit	39 lb (17.7 kg)/pair	Consult
151356	10540	Shackle anchor, bolt type 25 ton for 50,000 lb unit	63 lb (28.6 kg)/pair	Consult
146336	23650-0050	Shackle anchor, bolt type 55 ton for 100,000 lb unit	180 lb (82 kg)/pair	Consult
151359	N/A	Shackle anchor, bolt type 85 ton for 180,000 lb unit	206 lb (93 kg)/pair	Consult
151360	N/A	Shackle anchor, bolt type 120 ton for 260,000 lb unit	225 lb (102 kg)/pair	Consult
151361	N/A	Shackle anchor, bolt type 175 ton for 380,000 lb unit	665 lb (590 kg)/pair	Consult
151358	N/A	Shackle anchor, bolt type 250 ton for 550,000 lb unit	1,300 lb (318 kg)/pair	Consult
139381	503208-0001	MSI-8000 RF remote display (requires MSI-7300 equipped with optional RF modem)	5 lb (2.25 kg)	$1,190.00
153591	N/A	MSI-8000HD RF remote display, A/C powered with tilt stand (requires MSI-7300 equipped with optional RF modem)	5 lb (2.25 kg)	$1,300.00
165313	N/A	Heavy duty pelican transport case with precision cut Heavy duty foam for 500 lb–10,000 lb capacity units	10 lb	$325.00
145076	14317	Transport crate for 25,000 lb and 50,000 lb capacity unit	35 lb	$395.00
145073	14311	Transport crate for 100,000 lb capacity unit	42 lb	$395.00
139470	503414-0002	RS-232 serial cable for MSI-7300	1 lb (0.45 kg)	$135.00
178004	N/A	LaserLight2, 4 in (101 mm) six-digit RF scoreboard (requires MSI-7300 equipped with optional RF modem)	21 lb (10 kg)	$2,135.00
178006	N/A	LaserLight2, 6 in (152 mm) six-digit RF scoreboard (requires MSI-7300 equipped with optional RF modem)	37 lb (17 kg)	$2,545.00
149549	503486-0001	Universal 115/ 230 VAC 50/60 Hz (NA plug standard) battery charger for MSI-8000 remote display	3 lb (1.4 kg)	$135.00
182223	N/A	12V car charger adapter for MSI-8000	1 lb	$115.00
173014	N/A	Rugged remote control (requires MSI-7300 equipped with optional RF modem)	N/A	$280.00
150964	503489-0001	RS-232 13 ft (4 m) serial cable for MSI-8000	1 lb (0.45 kg)	$170.00
139438	N/A	Audible set point	N/A	$380.00
149550	503486-0002	Battery charger for MSI-8000 EC plug	N/A	$130.00

Optional rugged remote

NEW
MSI Dyna-Clamp
Tension Meter

Standard Features

- Dual line LCD display
- Two user programmable function keys
- IP65 anodized aluminum frame
- RS-232 port

Additional Options

(Contact MSI for application consultation)
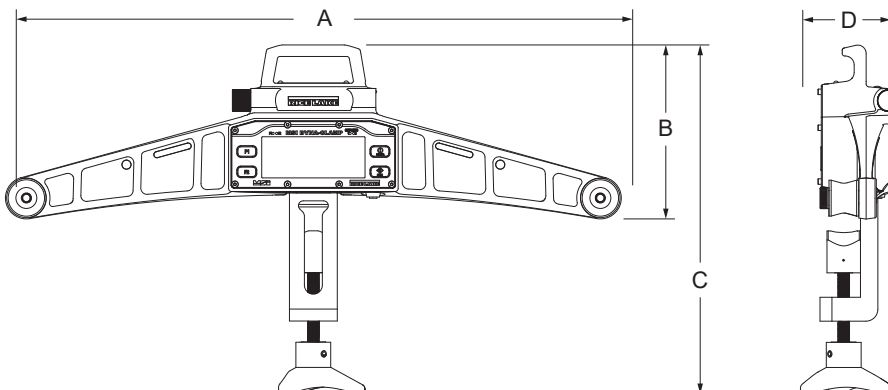
- Heavy-duty carrying case

Part Number/Price

Part #	Description	Tension	Price
189581	MSI Dyna-Clamp Tension Meter	12,500 lbf (5,670 kgf / 55.60 kN)	$4,395.00

Options/Accessories

Part #	Description	Price
198418	Heavy-duty carrying case	$550.00

Dimensions			
A	25.70 in (652.80 mm)	C	13.75 in-15.50 in (349.25 mm-393.70 mm)
B	7.30 in (185.50 mm)	D	3.70 in (94 mm)

Specifications

Power:
Battery operated two AA Cell 1.5 V alkaline batteries (can be replaced with rechargeable NiMH cells)

Max Tension:
12,500 lbf (5,670 kgf / 55.60 kN)

Operating Time:
Alkaline AA Cells 24 hours

Wire Rope:
Diameter 3/16 in (5 mm) – 1 in (25 mm)

Accuracy:
Rated Accuracy ±3% of capacity

Units:
lbf, kgf, kN

Resolution:
Standard 2,500 divisions

Two-Line LCD Display:
Primary display (bottom) six, 0.7 in (18 mm) numeric digits
Secondary display (top) eight, 0.5 in (13 mm) numeric digits

Function Keys:
Two programmable keys (user-defined) – F1, F2 (TEST, UNIT, PRINT, SCROLL, ACTFUN)
Two permanent keys – POWER, ZERO

Setpoints:
Two dedicated setpoints for minimum and maximum allowable wire rope tension (LEDs for measurements outside of allowable range)

Auto-Off Mode:
Prolongs battery life by turning power OFF after 15, 30, 45 or 60 minutes of no activity (user determined)

Enclosure:
IP65 powder-coated aluminum frame

Calibration:
Up to eight (8) factory programmed wire rope calibrations

Operating Temp:
-4°F to 122°F (-40°C to 50°C)

Operator Use:
Outdoor

Storage:
Indoor

Warranty:
Two-year limited

MSI-Clamp On Load Cell

Specifications

System Accuracy of Calibrated Capacity:
3-5%

Material:
4340 steel, zinc plated

IP Rating:
IP68

Cable Color Code:
Red + Excitation
Black – Excitation
Green + Signal
White – Signal

Cable Length:
20 ft. (6m) integral cable with blunt end termination

Standard Features

- ETD 150 construction
- Accommodates up to 3/4-inch wire rope size
- IP68
- Larger diameter clamp ons available - call for pricing

Options

- Custom sizes available on request
- Pair with an SCT transmitter for basic safety functions

Part Number/Price

Part #	Description	Price
179080	Load Cell Assembly Clamp-On for 3/8 to 1/2 in wire rope	$675.00
179082	Load Cell Assembly Clamp-On for 9/16 to 3/4 in wire rope	$800.00
188816	Kit with SCT-2200 for 3/8 to 1/2 in wire rope	$1,200.00
188817	Kit with SCT-2200 for 9/16 to 3/4 in wire rope	$1,330.00

Larger diameter clamp ons available - call for pricing

Dimensions

Cable Range	P/N	A	B	C
3/8 - 1/2	179080	Cable + 1.70	6.00	2.00
9/16-3/4	179082	Cable + 1.67	6.00	2.00
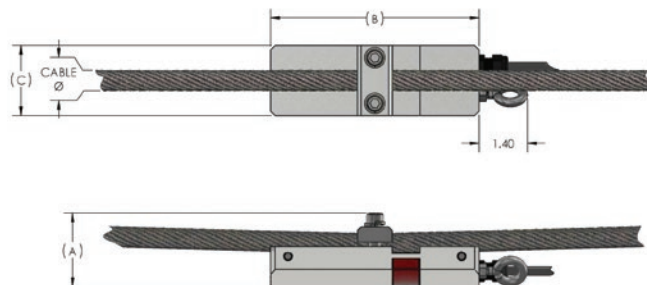
MSI-Load Pin Sensors

Standard Features

- Internally gauged load pin
- Idler sheave or dead end pin preferred location
- Minimum 5:1 safety factor
- 17-4 stainless steel construction
- ±1% to 3% accuracy of hoist capacity
- -40°F to 140°F standard operating temperature (other temperature compensated ranges available)

A key component for MSI's integrated overhead weighing solutions is the Load Pin Sensor. Typically designed and manufactured specifically to each integrated solution, the MSI load pin is strictly industrial grade. Each load pin design is precision machined from 17-4 stainless steel for safety, strength and corrosion resistance.

Each strain gauge location is precisely calculated and correctly placed in the optimum concentrated stress area of each installation. This MSI applied engineering process ensures the most efficient and accurate performance for each specific installation.

MSI load pin designs apply only internally mounted strain gauges for complete protection from the outside environment.

To receive a quotation for a load pin sensor to meet your application requirements, complete the load pin questionnaire also on page 81 or online at www.ricelake.com or contact an MSI overhead weighing specialist for further application assistance.

MSI Shear Web Load Cell

Standard Features

- Designed to be placed above the trunnion of a load block, this integrated low-profile load cell eliminates headroom loss
- Off-axis compensation

Specifications

Accuracy (Static Load):
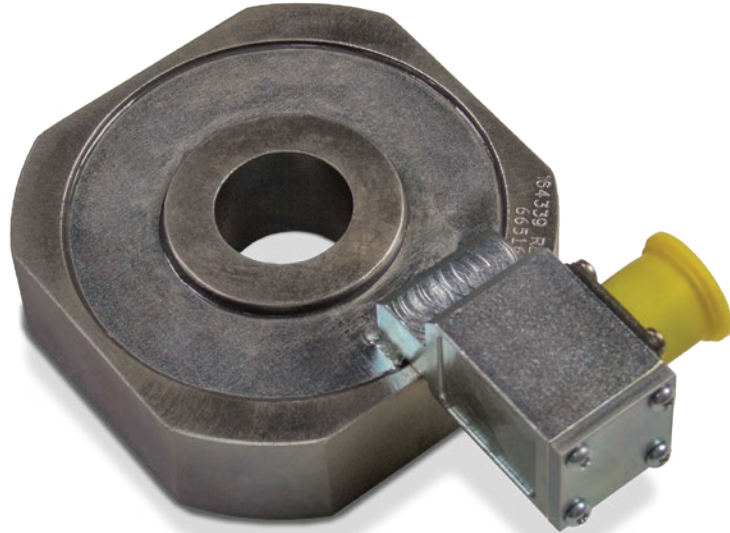0.5 - 1% system accuracy of rated capacity

Material:
4340 alloy steel, zinc plated

IP Rating:
IP67
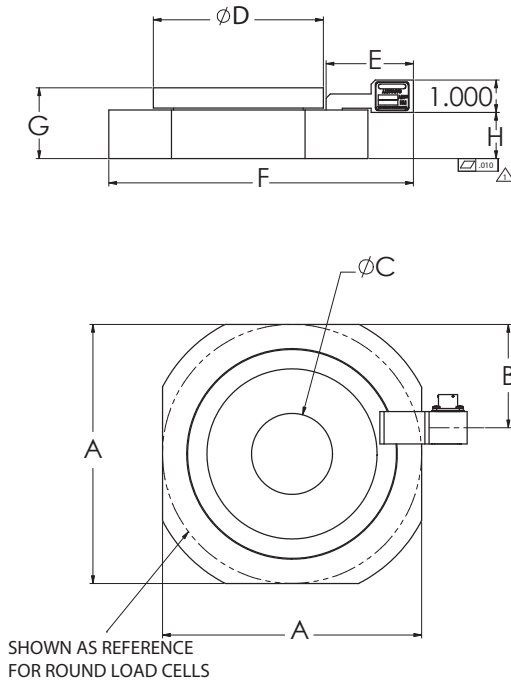
Resistance:
700 ohms

Part Number/Price

Part #	Description	Est. Weight	Price
160651	10,000 lb/5,000 kg capacity	5 lb	$1,905.00
163595	20,000 lb/10,000 kg capacity	10 lb	$2,010.00
163596	40,000 lb/20,000 kg capacity	20 lb	$2,155.00
163829	60,000 lb/30,000 kg capacity	30 lb	$2,260.00
163597	80,000 lb/40,000 kg capacity	34 lb	$2,365.00
163598	100,000 lb/50,000 kg capacity	38 lb	$2,525.00
159550	120,000 lb/60,000 kg capacity	60 lb	Consult
163599	160,000 lb/80,000 kg capacity	105 lb	Consult
163600	200,000 lb/100,000 kg capacity	215 lb	Consult

Options/Accessories

Part #	Description	Price
165978	Load cell interface cable to TranSend™, 6.5 ft	$280.00
165979	Load cell interface cable to TranSend, 10 ft	$300.00
165980	Load cell interface cable to TranSend, 16 ft	$315.00
165989	Load cell interface cable to TranSend, 20 ft	$345.00
165990	Load cell interface cable to TranSend, 25 ft	$380.00
165991	Load cell interface cable to TranSend, 32 ft	$435.00
134498	Load cell interface cable to CellScale™, 5 ft	$330.00
134495	Load cell interface cable to CellScale, 10 ft	$360.00
134500	Load cell interface cable to CellScale, 15 ft	$380.00
134499	Load cell interface cable to CellScale, 20 ft	$405.00
134501	Load cell interface cable to CellScale, 25 ft	$435.00

SHOWN AS REFERENCE FOR ROUND LOAD CELLS

Dimensions

Part #	Capacity	A	B	C (+0.005-0.000)	D	E	F	G	H	Required Hook Shank Diameter (+0.000,-0.005)
160651	10,000 lb	3.500	1.350	1.005	2.450	1.880	4.905	1.500	1.000	1.000
163595	20,000 lb	6.000	2.500	1.505	3.500	2.443	7.405	1.750	1.250	1.500
163596	40,000 lb	7.500	3.150	2.005	5.000	2.580	8.905	2.000	1.375	2.000
163829	60,000 lb	8.000	3.190	2.505	5.250	2.695	9.405	2.188	1.500	2.500
163597	80,000 lb	8.500	3.650	3.505	5.750	2.680	9.905	2.313	1.500	3.500
163598	100,000 lb	9.125	3.873	4.005	7.000	2.382	10.530	2.668	1.875	4.000
159550	120,000 lb	9.125	3.873	4.005	7.000	2.382	10.530	2.813	2.000	4.000
163599	160,000 lb	16.000	7.030	6.005	14.500	2.955	17.405	4.625	2.500	6.000
163600	200,000 lb	16.000	7.030	6.005	14.500	2.955	17.405	5.125	3.000	6.000

MSI-Tension Link Load Cell

Specifications

Input Resistance:
1,500 ohm

Output Resistance:
2,000 ohm

Full Scale Output:
0.8mV/V

Connector Pin Out:
A: EX+
B: Sig +
C: Sig –
D: EX-

Accuracy:
0.1% sensory accuracy

Material:
4340 steel

Standard Features

- 4340 Steel construction
- Mil Spec connector
- 7:1 Safety factor

Additional Options

(Contact MSI for application consultation)
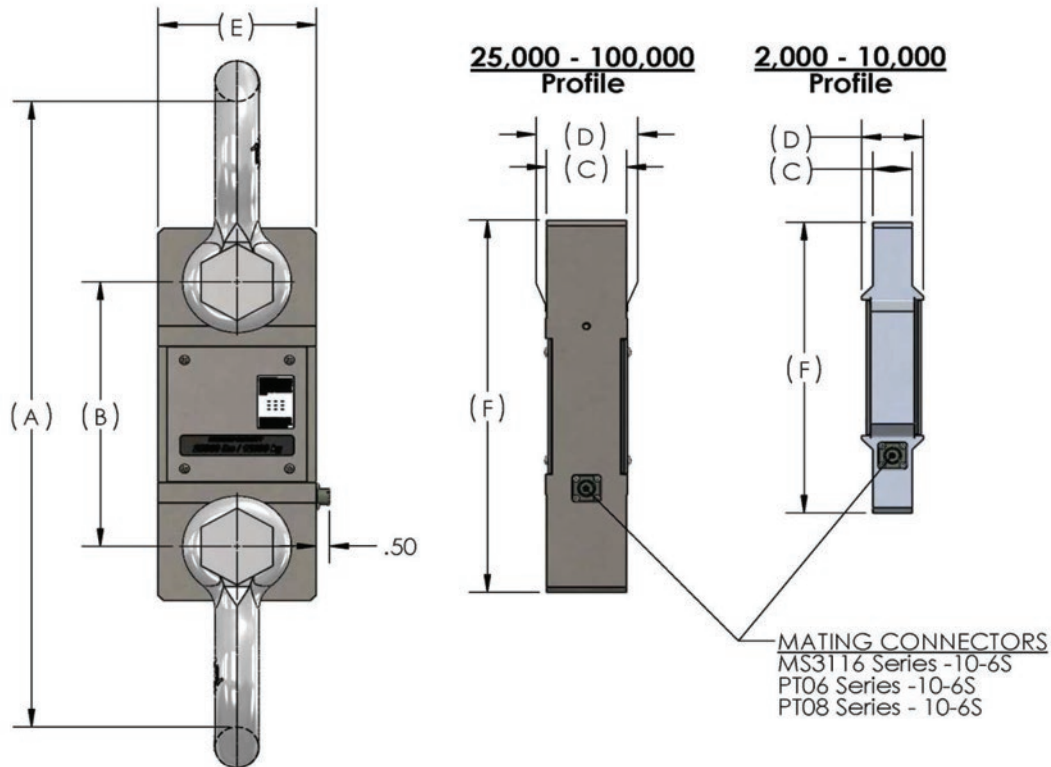
- Crosby® top and bottom shackles

Part Number/Price

Part #	Description	Price
181907	2K 7200 Style Load Cell Only	Consult
181908	5K 7200 Style Load Cell Only	Consult
181909	10K 7200 Style Load Cell Only	Consult
178093	25K 7200 Style Load Cell Only	Consult
178094	50K 7200 Style Load Cell Only	Consult
181910	100K 7200 Style Load Cell Only	Consult
134505	Mating Cable Assembly, 10 ft	$165.00

Contact factory for higher capacities
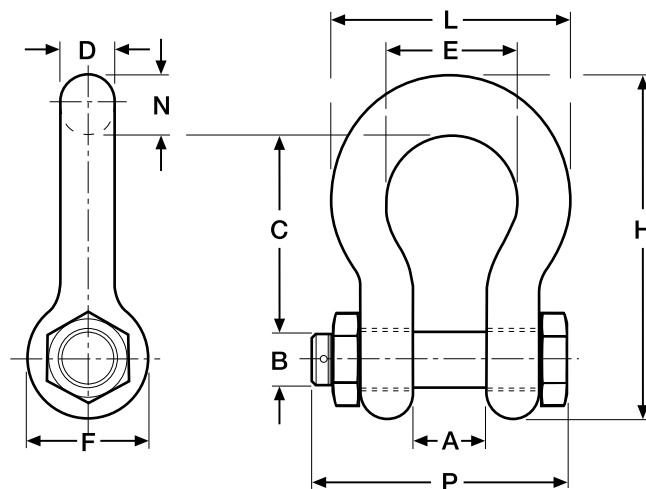
Dimensions

Capacity (lbs)	P/N	Load Cell Material	(A) Headroom Loss	(B) C-C Length	(C) Lug Thk	(D) Body Thk	(E) Body Width	(F) Body Length	Lug Hole	Crosby Shackle	
2,000	181907	Aluminum	13.50	8.00	0.99	2.13	4.50	9.75	0.78	3-1/4 T	151357
5,000	181908	Aluminum	13.50	8.00	0.99	2.13	4.50	9.75	0.78	3-1/7 T	151357
10,000	181909	Aluminum	16.13	8.50	1.35	2.13	5.37	10.75	1.05	6-1/2 T	151355
25,000	178093	Steel	22.39	9.26	2.24	2.24	4.80	12.76	1.67	17 T	141992
50,000	178094	Steel	25.74	9.76	2.74	2.81	5.43	13.76	2.05	25 T	151356
100,000	181910	Steel	28.49	10.74	3.09	3.09	6.86	15.74	2.30	55 T	146336

25,000 - 100,000 Profile

2,000 - 10,000 Profile

MATING CONNECTORS
MS3116 Series -10-6S
PT06 Series -10-6S
PT08 Series - 10-6S

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Shackle Dimensions

Part Number/Price

Part #	MSI Part #	W.I.I. Tons	Size	A	B	C	D	E	F	H	L	N	P	Weight	Price
151357	10541	3 1/4	0.63	1.06	.75	2.38	0.63	1.69	1.56	4.22	2.94	0.69	N/A	1.58	Consult
151355	10538	6 1/2	0.88	1.44	1.00	3.31	0.88	2.28	2.13	5.75	4.03	0.97	5.00	3.95	Consult
141992	10539	17	1.50	2.38	1.63	5.75	1.50	3.88	3.63	9.88	6.88	1.62	8.25	19.50	Consult
151356	10540	25	1.75	2.88	2.00	7.00	1.75	5.00	4.32	11.88	8.50	2.12	9.59	31.30	Consult
146334	23650-0030	30	1.50	2.38	1.63	5.75	1.50	3.88	3.63	9.88	6.88	1.62	8.25	20.80	Consult
146335	23650-0040	40	1.75	2.88	2.00	7.00	1.75	5.00	4.32	11.88	8.50	2.12	9.59	33.91	Consult
146336	23650-0050	55	2.00	3.25	2.25	7.75	2.00	5.75	5.00	13.38	9.75	2.00	11.00	51.75	Consult
151359	N/A	85	2.5	4.12	2.75	10.50	2.72	7.25	5.69	17.84	12.87	3.12	13.58	96.00	Consult
151360	23650-0110	120	3.00	5.00	3.25	13.00	3.00	7.88	6.50	21.50	14.50	3.63	16.50	178.00	Consult
83455	N/A	120	3	5.00	3.25	13.00	3.11	7.88	6.50	21.50	14.36	3.63	15.13	178.00	Consult
151361	23650-0175	175	4.00	5.50	4.25	14.50	4.00	10.00	9.00	25.69	18.38	4.56	19.75	338.00	Consult
151358		250	4	8.50	5.00	20.00	4.50	13.00	12.00	35.00	24.50	6.50	22.68	600.00	Consult
Oversized Shackles															
148497	501386-0100	40	1.75	2.88	2.00	10.00	2.25	6.00	4.32	15.35	10.50	2.25	9.00	45.00	Consult
148393	501082-0100	40	2.25	2.88	2.00	12.50	2.25	8.00	4.32	17.85	12.50	2.25	10.00	90.00	Consult
148394	501083-0100	50	2.00	3.25	2.25	12.25	2.50	8.00	5.00	18.50	13.00	2.50	11.00	72.00	Consult
Shims															
146534	30013-0112	(For use with 50,000 ton/70,000 ton systems)													Consult

RICE LAKE
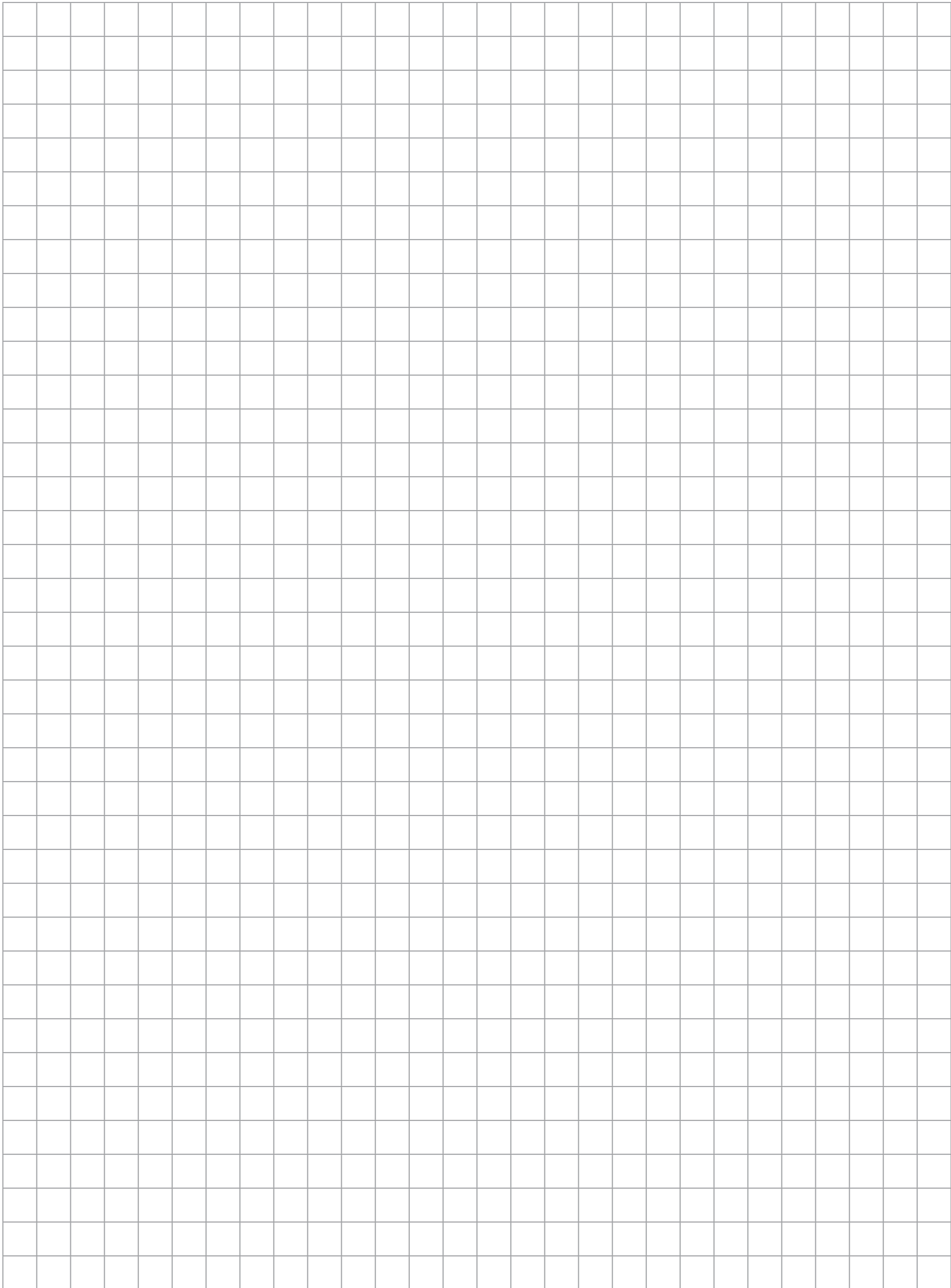
Indicators / Controllers

TABLE OF CONTENTS

ESPAÑOL

Visite **ricelake.com/spanish** para ver todos los materiales Rice Lake que están disponibles en español.

RICE LAKE

1280 Enterprise™ Series
Programmable Color Touchscreen Weight Indicator/Controller

Panel Mount

7-inch Touch-only

12-inch Touch-only

Universal

Wall Mount

Resolution:
Internal: 8 million counts/8,000,000
Display: 1,000,000

System Linearity
± 0.01% full scale

Digital I/O:
Eight I/O channels on CPU board
Optional 24-channel I/O expansion boards

Communication Ports:
Port 1 & 2: Full duplex RS-232 with CTS/RTS,
RS-422/485
Baud Rate: 1200 to 115200
Port 3: USB 2.0 Device (Micro)
Port 4: Bluetooth® SPP 2.1+EDR
USB Host: (2) Type A Connectors max 500 mA
Ethernet: Wired 10/100 Auto-MDX
Ethernet: Wireless 802.11 b/g/n 2.4GHz

Onboard:
Selectable filters: Three stage, Adaptive or Damping
Embedded Linux® OS
8 GB eMMC (system use)
1 GB DDR3 RAM
460 MB onboard database (SQLite) storage
Up to 32 GB micro SD card (sold separately)

Display:
Seven-inch, 800 x 480 pixel, graphical color TFT
display 500 or 1,000 NIT
Twelve-inch, 1280 x 800 pixel, graphical color TFT
display 1,500 NIT

Keys/Buttons:
22-key membrane panel, tactile buttons, on-screen
keyboard for text and numeric entry, USB port for
flash drive, keyboard and printer

Temperature Range:
Certified: 14°F to 104°F (-10°C to 40°C)
Operating: -4°F to 131°F (-20°C to 55°C)

Weight:
Universal enclosure: 11 lb (4.9 kg)
Panel mount enclosure: 8 lb (3.6 kg)
Wall mount enclosure: 23 lb (10.4 kg)
Panel mount 7 in touch-only: 7 lb (3.1 kg)
Panel mount 12 in touch-only: 10 lb (4.5 kg)

Rating/Material:
Stainless steel 304 enclosure
Universal: IP69K
Wall mount: IP66
Panel moun
t: IP69K, NEMA Type 4X and 12

Warranty:
Two-year limited warranty

EMC Immunity:
EN 50082 Part 2 IEC EN 61000-4-2, 3, 4, 5, 6, 8,
and 11

Approvals:
NTEP CC 15-001/Class III/IIIL 10,000d
Measurement Canada AM-5980C,
Class III/III HD 10,000d
OIML R76/2006-NL1-16.04 Class III/IIII 10,000d
EU Test Certificate TC8596
UL/cUL Listed (universal, wall mount)
UL/cUL Recognized (panel mount)
CE Marked

Standard Features

- Graphical color display that adjusts for ambient light conditions
- Highly customizable graphical user interface
- Three different enclosure types: universal with tilt stand, panel mount and wall mount
- Resistive color touchscreen that can be used with gloves
- On-screen keyboard available during entry mode or use an external keyboard
- Multi-language operation and text entry
- Keypad for scale operations, numeric entry and navigation
- More than 150 built-in functions for programming
- Customize applications and data tables with iRite™ software
- Built-in web server for remote access, systems integration and data monitoring
- Up to eight scales supporting five scale types:
  - Analog load cell scales
  - Total scales
  - Serial scales
  - Program scales
  - iQUBE²® scales
- Multi-range/interval weighing functions
- Eight digital I/O for control and pulse count
- 100 setpoints, 18 configurable setpoint types
- 22 softkeys with 10 user-defined
- Two RS-232 and RS-485 serial ports
- USB, Ethernet TCP/IP, Wi-Fi Direct ® and Bluetooth® ports

Approvals

NTEP

Measurement
Canada
Approved

OIML

CE

c (UL) US
LISTED

c (UL) US

Specifications

Power:
AC voltages: 100-240 VAC; 50-60 Hz
DC voltages: 11-30 VDC
Consumption: 60W

Excitation Voltage:
10 ± 0.5 VDC
16 x 350Ω or 32 x 700Ω load cells per A/D card

Analog Signal Input Range:
-60 mV to 60 mV

Analog Signal Sensitivity:
0.3 µV/graduation minimum at 7.5 Hz–120 Hz
1.0 µV/graduation recommended

A/D Sample Rate:
7.5 to 960 Hz, software selectable

1280 Enterprise Series
Programmable Color Touchscreen Weight Indicator/Controller
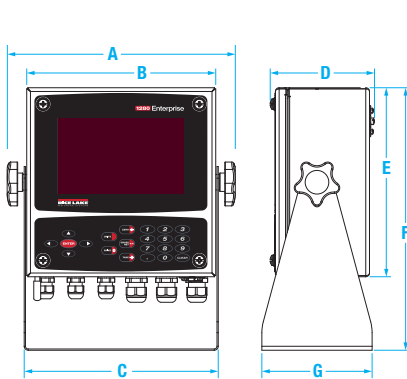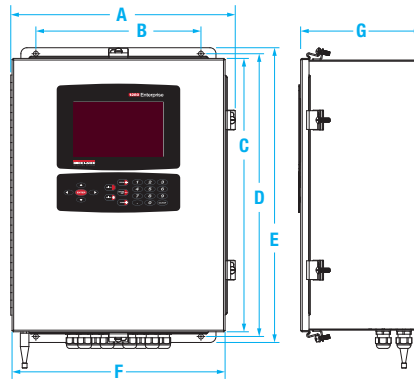

7-inch model with keypad
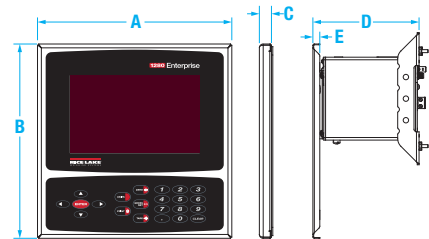

7-inch touch-only model

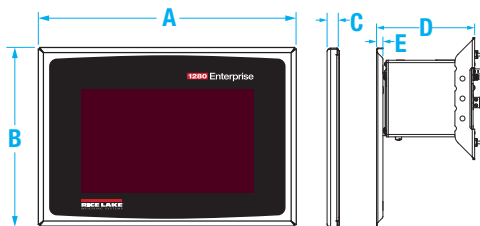*12-inch touch-only model*

Numeric Keypad Models:

1280-2

1280-3

1280-4

Universal (1280-2) Dimensions

A	10.86 in (276 mm)	B	9.00 in (229 mm)
C	9.24 in (235 mm)	D	4.97 in (126 mm)
E	9.00 in (229 mm)	F	12.50 in (318 mm)
G	5.25 in (133 mm)		

Wall Mount (1280-3) Dimensions

A	14.92 in (379 mm)	B	11 in (279 mm)
C	18.22 in (463 mm)	D	18.84 in (479 mm)
E	19.64 in (499 mm)	F	14.20 in (361 mm)
G	8.08 in (205 mm)		

Panel Mount (1280-4) Dimensions

A	9.00 in (229 mm)	B	9.00 in (229 mm)
C	0.58 in (15 mm)	D	5.34 in (136 mm)
E	0.32 in (8 mm)		

Touch-only Models:

1280-5
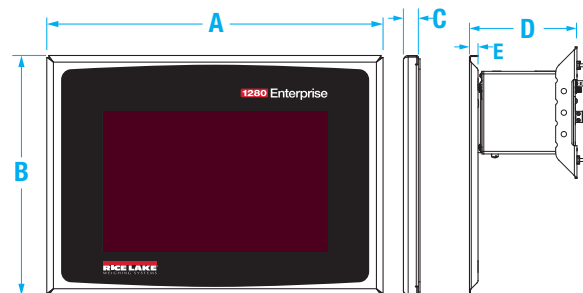
1280-6

7-inch Touch-only (1280-5) Dimensions

A	9.00 in (229 mm)	B	6.22 in (158 mm)
C	0.58 in (15 mm)	D	5.34 in (136 mm)
E	0.32 in (8 mm)		

12-inch Touch-only (1280-6) Dimensions

A	14.00 in (356 mm)	B	10 in (254 mm)
C	0.58 in (15 mm)	D	5.34 in (136 mm)
E	0.32 in (8 mm)		

1280 Enterprise Series
Programmable Color Touchscreen Weight Indicator/Controller

Generate a 1280 Enterprise Series Model Reference Code
This reference number can be used at time of ordering.

ENCLOSURE TYPE
- 1 Universal (1280-2)
- 2 Panel (1280-4)
- 3 Wall (1280-3)
- 4 Touch-only Panel 7 in (1280-5)
- 5 Touch-only Panel 12 in (1280-6)

POWER TYPE
- 1 AC
- 2 DC

CORD TYPE
- 1 US Plug Universal
- 2 Brazil Plug Universal
- 3 Euro Plug Universal
- 4 US Plug Wall
- 5 Euro Plug Wall
- 6 Brazil Plug Wall
- 7 UK Plug Universal
- 8 AU/NZ Plug Universal
- 9 UK Plug Wall
- A AU/NZ Plug Wall

DISPLAY TYPE
- 1 500NIT 7 in Unviersal
- 2 1000NIT 7 in Universal
- 3 500NIT 7 in Panel/Wall
- 4 1000NIT 7 in Panel/Wall
- 5 1500NIT 12 in Panel

OPTION CARDS *ALL SLOTS MUST BE FILLED*
- A Blank *If no option, controller will need 6 blanks*
- B Single A/D Scale
- C Dual A/D Scale
- D 24 Channel Digital I/0
- E Dual Serial Channel
- F 4-dry Contact Relay
- G Single Analog Out
- H Dual Analog Out
- I Analog Input
- J EtherNet/IP
- K DeviceNet
- L ProfiNet
- M Modbus TCP
- N Profibus DP
- O EtherCat
- P PowerLink

Part Number

Part #	Reference #	Description	Power	Display	Option Installed	Price
Universal Enclosure with 500 NIT Display (1280-2)						
171427 †	1111BAAAAA	1280 Universal	115 VAC	500 NIT	Single Scale Card	$3,035.00
171441 ††	1131BAAAAA	1280 Universal	100-240 VAC	500 NIT	Single Scale Card	$3,035.00
171662 †	1111CAAAAA	1280 Universal	115 VAC	500 NIT	Dual Scale Card	$3,185.00
172188 ††	1131CAAAAA	1280 Universal	100-240 VAC	500 NIT	Dual Scale Card	$3,185.00
Panel Mount Enclosure with 500 NIT Display (1280-4)						
171663	21-3BAAAAA	1280 Panel Mount	100-240 VAC	500 NIT	Single Scale Card	$2,835.00
172186	21-3CAAAAA	1280 Panel Mount	100-240 VAC	500 NIT	Dual Scale Card	$2,985.00
Wall Mount Enclosure with 500 NIT Display (1280-3)						
173673 †	3143BAAAAA	1280 Wall Mount	115 VAC	500 NIT	Single Scale Card	$3,285.00
174143 ††	3153BAAAAA	1280 Wall Mount	100-240 VAC	500 NIT	Single Scale Card	$3,285.00
174144 †	3143CAAAAA	1280 Wall Mount	115 VAC	500 NIT	Dual Scale Card	$3,435.00
174145 ††	3153CAAAAA	1280 Wall Mount	100-240 VAC	500 NIT	Dual Scale Card	$3,435.00
Wall Mount Enclosure with 1000 NIT Display (1280-3)						
172184 †	3144BAAAAA	1280 Wall Mount	115 VAC	1,000 NIT	Single Scale Card	$3,385.00
172185 ††	3154BAAAAA	1280 Wall Mount	100-240 VAC	1,000 NIT	Single Scale Card	$3,385.00
173806 †	3144CAAAAA	1280 Wall Mount	115 VAC	1,000 NIT	Dual Scale Card	$3,535.00
172187 ††	3154CAAAAA	1280 Wall Mount	100-240 VAC	1,000 NIT	Dual Scale Card	$3,535.00
Touch-only 7 inch with 500 NIT Display (1280-5)						
186618	41-3BAAAAA	1280 Touch-only 7 in	100-240 VAC	500 NIT	Single Scale Card	$2,835.00
Touch-only 12 inch with 1500 NIT Display (1280-6)						
186465	51-5BAAAAA	1280 Touch-only 12 in	100-240 VAC	1,500 NIT	Single Scale Card	$3,535.00

† US plug (NA) - Type B   †† Euro Plug - Type E   (Brazil) - Type N

††† BS1363 (UK) - Type G   †††† AS 3112 (Australian) - Type I

Single A/D Scale

Excitation Voltage:
10 VDC bi-polar, 4 or 6 wire sensing
16 x 350 ohms per channel
Analog Input Signal:
-10 to +40 mV

Part #	Description	Price
164085	Single scale A/D	$360.00
166957	A/D sealing kit	$12.00

Dual A/D Scale

Excitation Voltage:
10 VDC bi-polar, 4 or 6 wire sensing
8 x 350 ohms per channel
Analog Input Signal:
-10 to +40 mV

Part #	Description	Price
164683	Dual scale A/D	$510.00
166957	A/D sealing kit	$12.00

Digital I/O

24 channels, configurable as inputs or outputs
Inputs: 5 VDC max, active low; Outputs: 20 mA
max per channel, active low; 5 VDC
source available: 500 mA max

Part #	Description	Price
164684 *	Digital I/O	$310.00
170008	DIO adapter, includes 60 pin flat ribbon cable, 24 in	$125.00
170009	DIO adapter, includes 60 pin round cable, 60 in	$150.00
170736	DIO adapter, includes 60 pin cable and cord grip, 60 in	$150.00

* 24 I/O ribbon cable required.

Dual Serial Channel

Two-channel, full duplex RS-232 with CTS/
RTS, RS-485 or RS-422, 1200-115200 baud

Part #	Description	Price
164685	Dual serial channel	$360.00

Single Analog Out

16 bit, voltage output 0-10 VDC,current output
0-20mA, 4-20mA

Part #	Description	Price
165366	Single analog out	$360.00

Dual Analog Out

16 bit, voltage output 0-10 VDC, current output
0-20mA, 4-20mA

Part #	Description	Price
164686	Dual analog out	$510.00

Relay Card

Relay four-dry contact, max current
3A @ 30 VDC, 3A @250VAC

Part #	Description	Price
164689	Relay card	$410.00

Analog Input

Analog Input Signal:
±10VDC, ±100mV, 0-20mA

Part #	Description	Price
164687	Dual analog input	$610.00

Data Exchange with PLC/DCS Systems

EtherNet/IP

Part #	Description	Price
165792	EtherNet/IP	$575.00

DeviceNet

Part #	Description	Price
165793	DeviceNet	$575.00

Profinet

Part #	Description	Price
165794	Profinet	$575.00

Modbus TCP

Part #	Description	Price
165796	Modbus TCP	$575.00

Profibus DP

Part #	Description	Price
165795	Profibus DP	$575.00

EtherCAT

Part #	Description	Price
179533	EtherCAT	$575.00

PowerLink

Part #	Description	Price
182319	PowerLink	$800.00

INDICATORS / CONTROLLERS

www.ricelake.com | Phone: 800-472-6703

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RICE LAKE

1280 Enterprise Series
Programmable Color Touchscreen Weight Indicator/Controller

Grayhill Relays and Racks

Part #	Description	Price
52332	Two-channel input relay, 2.5-28 VDC	$49.00
52318	Two-channel input relay, 120 VAC	$49.00
52319	Two-channel input relay, 240 VAC	$49.00
52331	Two-channel input relay, 10-32 VDC	$49.00
52316	Two-channel output relay, 120-140 VAC at 2 amp	$49.00
52317	Two-channel output relay, 240-280 VAC at 7 amp	$49.00
71376	Two-channel output relay, 3-60 VDC at 1 amp	$69.00
71377	Two-channel output relay, 0-200 VDC/VAC at 1.5 A/10 W (dry contact)	$89.00
84698	Two-channel output relay, inductive load, 120-140 VAC at 2 A	$69.00
84699	Two-channel output relay, inductive load, 240-280 VAC at 2 A	$69.00
52312	Eight-channel relay rack, panel mount and wall mount, requires 50-pin flat or round ribbon cable - 4 slots	$169.00
52314	16-channel relay rack, panel mount and wall mount, requires 50-pin flat or round ribbon cable - 8 slots	$249.00
52315	24-channel relay rack, panel mount and wall mount, requires 50-pin flat or round ribbon cable - 12 slots	$379.00
170008	Cable, 60-pin flat ribbon with 50-pin adapter, 24 in length	$125.00
170009	Cable, 60-pin round with 50-pin adapter, 60 in length	$150.00
170736	Cable, 60-pin round with cord grip and 50-pin adapter, 60 in length	$150.00

Options

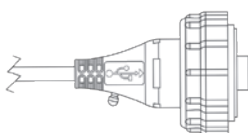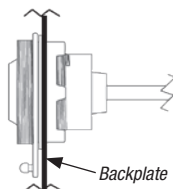| Part #	Description	Price
Manuals and Software		
77925	Revolution scale software	$35.00
166046	Manual, Operation	$25.00
167659	Manual, Technical	$35.00
167660	CD, 1280 Documents	$25.00
164939	8 GB Micro SD card with SD and USB adapter	$23.00
173046	USB flash drive, 1 GB	$10.00
Extended Cable Length for Touch Only Models		
182600	Display cable for 7 in (500 NIT) touch-only, 5 ft length	$125.00
182601	Display cable for 7 in (500 NIT) touch-only, 10 ft length	$150.00
187489	Display cable for 7 in (1,000 NIT) touch-only, 10 ft length	$150.00
180027	Display cable for 12 in touch-only, 5 ft length	$150.00
180028	Display cable for 12 in touch-only, 10 ft length	$150.00
180744	Touch cable for touch-only, 5 ft length	$100.00
180745	Touch cable for touch-only, 10 ft length	$100.00

Unsealed Connectors

Type B

Type A

Sealed Connector

Sealed Receptacle

Backplate

Options

Part #	Description	Price
Primary Component Parts		
163400	7 in 500 NIT display	$325.00
163399	7 in 1,000 NIT display	$425.00
182992	12 in 1,500 NIT display	$825.00
179992	CPU board assembly includes face plate and fan plate	$1,045.00
160758	Back plane board	$200.00
162693	AC power supply board	$170.00
162694	DC power supply board	$170.00
164121	Overlay, keypad, for panel & wall mount	$70.00
164120	Overlay, touchscreen, for panel & wall mount	$125.00
161731	Overlay, keypad, for universal	$70.00
161730	Overlay, touchscreen, for universal	$125.00
178498	Overlay, touchscreen, for 7 in touch-only panel mount	$200.00
176126	Overlay, touchscreen, for 12 in touch-only panel mount	$400.00
178161	Clear protective overlay display (pack of 5)	$60.00
178163	Clear protective overlay keypad (pack of 5)	$60.00

Options/Accessories

Part #	Description	Sealed A	Sealed B	Unsealed A	Unsealed B	Price
USB Cables (Note: Cables have a plug)						
152434	Unsealed connectors USB-A to USB micro A, 2 m cable			X		$15.00
79074	Unsealed connectors USB-A to USB-B, 2 m cable			X	X	$30.00
124700	Sealed connectors, USB-A to USB-B, 3 m IP68 cable	X	X			$85.00
126477	Sealed connector USB-A to unsealed connector USB-A, 3 m IP68 cable	X		X		$85.00
124701	Sealed connector USB-A to unsealed connector USB-B, 3 m IP68 cable	X			X	$85.00
124702	Sealed connector USB-B to unsealed connector USB-A, 3 m IP68 cable		X	X		$85.00
USB Receptacles (Note: Receptacles have a socket)						
176790	Sealed receptacle USB-A for panel mount, 0.75 m cable	X		X		$100.00
126476	Sealed receptacle USB-A for wall mount, 0.5 m cable	X		X		$85.00
172735	Sealed receptacle USB-A for universal, 0.25 m cable	X		X		$85.00
124694	Cover for sealed receptacles					$12.00
124689	Cover for flash driver mounts on sealed receptacle					$23.00
Ethernet Cables		**Sealed**		**Unsealed**		
72697	Unsealed Ethernet, R-J45 to RJ-45, 2 m cable			X		$35.00
124706	Sealed to sealed Ethernet 3 m cable	X				$85.00
124707	Sealed to unsealed Ethernet 3 m cable	X		X		$85.00
Ethernet Receptacles		**Sealed**		**Unsealed**		
176789	Sealed receptacle Ethernet RJ-45, 0.75 m cable	X				$100.00
172734	Sealed receptacle Ethernet RJ-45, 0.5 m cable	X				$85.00
126353	Sealed receptacle Ethernet RJ-45, 0.25 m cable	X				$85.00

To have your option factory installed, please specify when placing your order.

Specifications

Enclosure:
NEMA Type 4, IP65

Weight:
0.98 lb (445 g)

Keypad:
On/Off, Zero (100%), Tare, Print, and two user-defined keys for the following functions: peak hold, high resolution, total, view total, net/gross, units switching

Display:
Six-digit 1.0 in (26.4 mm) LCD

Units Displayed:
Pounds, kilograms, tons, metric tons, kilonewtons

Annunciators:
Stable, COZ, low battery, peak, net, kg, kN, lb, M, ton, setpoint, function LEDs

Power:
Integral lithium ion battery
Universal 115/230 VAC, 50/60 Hz battery charger (NA plug included)

Operating Time:
Up to 24 hours of continuous use (15 minute auto-shutoff with non-use)

Operating Temperature:
-4°F to 140°F (-20°C to 60°C)

RF Radio Link:
2.4 GHz 802.15.4
Communicates with RF 3460, 4260, 7300, 7000 & 7001

RF Effective Range:
Typically 100 or more feet (33 m)

Connector:
Four-pin Turck connector for charging and RS-232 communication

Warranty:
One-year limited warranty

Standard Features

- Handheld RF remote display with six-digit 1.0 in (26.4 mm) LCD screen
- Membrane keypad for remote control functionality
- User- definable function keys for added versatility
- Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)
- Communicates with RF MSI-3460 Challenger 3, MSI-4260 Port-A-Weigh, MSI-7300 Dyna-Link 2, MSI-7000 and MSI-7001 TranSend™

Part Number/Price

Part #	MSI Part #	Description	Est. Weight	Price
139381	503208-0001	MSI-8000 RF remote display (requires ScaleCore™ equipped MSI-7300, MSI-4260, MSI-3460 and TranSend receivers)	5 lb	$1,190.00

Options/Accessories

Part #	MSI Part #	Description	Est. Weight	Price
149549	503486-0001	Universal 115/230 VAC 50/60 Hz (NA plug standard) battery charger for MSI-8000 RF remote display	3 lb	$135.00
149550	503486-0002	Universal 115/230 VAC 50/60 Hz (EC plug standard) battery charger for MSI 8000 RF remote display	1 lb	$130.00
150964	503489-0001	DB9 female serial interface cable for MSI-8000 RF remote display	1 lb	$170.00
151095	503506-0001	Audible alarm	—	$270.00
182223		12V car charger adapter for MSI-8000	1 lb	$115.00

Dimensions			
A	8.00 in (203 mm)	C	3.85 in (98 mm)
B	3.85 in (98 mm)	D	1.37 in (35 mm)

53
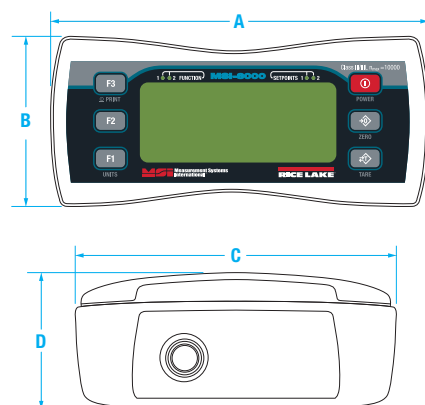
MSI-8000HD
Indicator/Remote Display

Shown with tilt stand.

Standard Features

- Indicator or RF remote display with six-digit 1.0 in (26.4 mm) LCD screen
- IP68 milled aluminum enclosure
- Membrane keypad for remote-control functionality
- User-definable function keys for added versatility
- Compatible with all ScaleCore™-based products including: MSI-7300 Dyna-Link 2, MSI-3460 Challenger 3, MSI-4260 Port-A-Weigh, MSI-7000 and MSI-7001 TranSend™
- Swivel tilt stand
- NTEP certified configuration

Options

- Up to 8 configurable relay outputs
- Wi-Fi communications
- Bluetooth® communications
- 802.15.4 Serial RF
- FHSS
- Wired Ethernet

Approvals

Dimensions

A	12.82 in (326 mm)	B		11.05 in (281 mm)

Specifications

Enclosure:
NEMA Type 4, IP68 milled anodized aluminum with O-ring gaskets

Keypad:
On/Off, Zero (100%), Tare, Print, and Two user-defined keys for the following functions: peak hold, high resolution, total, view total, net/gross, units switching

Display:
Six-digit 1.0 in (26.4 mm) LCD

Units Displayed:
Pounds, kilograms, tons, metric tons, kilonewtons

Annunciators:
Stable, COZ, peak, kg, kN. lb, M, ton, setpoint, function LEDs
Channels: 1, 2, 3, 4, TTL

Power:
90-267 VAC, 9-36 VDC, 18-72 VDC, 120-300 VDC
Optional battery power module available

Operating Temperature:
-4°F to 140°F (-20°C to 60°C)

RF Remote Channels:
Up to four remote sensors, monitored individually, in pairs or sum all (non-A/D version only)

Service Counters:
A/D version only

A/D Inputs:
Two independent or summing load cell inputs

Excitation:
4.8V current limited and over-voltage protected

Filtering:
Off, Low, Hi-1, Hi-2

RF Radio Link:
2.4 GHz 802.15.4
Compatible with all ScaleCore™-based products including: MSI-7300 Dyna-Link 2, MSI-3460 Challenger 3, MSI-4260 Port-A-Weigh, MSI-7000 and MSI-7001

RF Effective Range:
Typically 100 or more feet (33m)

Data I/O:
Dual RS-232 comm ports

Optional Communications:
Wi-Fi
Bluetooth®
Serial RF (Single Sequence or FHSS)

Warranty:
One-year limited

Approvals:
NTEP COC#15-110 (-10°C to 40°C)

Part Number/Price

Part #	Description	Est. Weight	Price
153591	MSI 8000HD ScaleCore RF/Remote Display/85-265 VAC	5 lb (2.5 kg)	$1,300.00
154853	MSI 8000HD ScaleCore RF/Remote Display/Internal Battery	5 lb (2.5 kg)	$1,405.00
160476	MSI 8000HD ScaleCore RF/Remote Display/7-36 VDC	5 lb (2.5 kg)	$1,255.00
159377	MSI 8000HD ScaleCore RF/Remote Display/18-72 VDC	5 lb (2.5 kg)	$1,285.00
159376	MSI 8000HD ScaleCore RF/Remote Display/9-36 VDC	5 lb (2.5 kg)	$1,285.00
158427	MSI 8000HD Meter/2 A/D Inputs/85-265 VAC (non RF)	5 lb (2.5 kg)	$1,580.00
158428	MSI 8000HD Meter/2 A/D Inputs/Internal Battery (non RF)	5 lb (2.5 kg)	$1,685.00
160478	MSI 8000HD Meter/2 A/D Inputs/7-36 VDC (non RF)	5 lb (2.5 kg)	$1,405.00
159381	MSI 8000HD Meter/2 A/D Inputs/18-72 VDC (non RF)	5 lb (2.5 kg)	$1,440.00
159380	MSI 8000HD Meter/2 A/D Inputs/9-36 VDC (non RF)	5 lb (2.5 kg)	$1,440.00
158425	MSI-8000HD RF Meter/2 A/D Inputs/85-265 VAC	5 lb (2.5 kg)	$1,595.00
158426	MSI-8000HD RF Meter/2 A/D Inputs/Internal Battery	5 lb (2.5 kg)	$1,735.00
160477	MSI 8000HD RF Meter/2 A/D Inputs/7-36 VDC	5 lb (2.5 kg)	$1,595.00
159379	MSI 8000HD RF Meter/2 A/D Inputs/18-72 VDC	5 lb (2.5 kg)	$1,605.00
159378	MSI 8000HD RF Meter/2 A/D Inputs/9-36VDC	5 lb (2.5 kg)	$1,605.00
176957 *	MSI 8000HD BT Meter/85-265 VAC	5 lb (2.5 kg)	Consult
176958	MSI 8000HD Wi-Fi Meter/85/265 VAC	5 lb (2.5 kg)	$1,330.00
176959 *	MSI 8000HD BT Meter/Internal Battery	5 lb (2.5 kg)	Consult
176960	MSI 8000HD Wi-Fi Meter/Internal Battery	5 lb (2.5 kg)	$1,440.00
176962 *	MSI 8000HD BT Meter/7-36 VDC	5 lb (2.5 kg)	Consult
176964	MSI 8000HD Wi-Fi Meter/7-36 VDC	5 lb (2.5 kg)	$1,280.00
176965 *	MSI 8000HD BT Meter/9-36 VDC	5 lb (2.5 kg)	Consult
176966	MSI 8000HD Wi-Fi Meter/9-36 VDC	5 lb (2.5 kg)	$1,315.00
176967 *	MSI 8000HD BT Meter/18-72 VDC	5 lb (2.5 kg)	Consult
176968	MSI 8000HD Wi-Fi Meter/18-72 VDC	5 lb (2.5 kg)	$1,315.00

* Bluetooth modems only work with certain Android devices. Please contact MSI for potential applications.

Options/Accessories

Part #	Description	Price
155173	MSI-8000HD spare tilt stand option kit	$75.00
155193	MSI-8000HD Ethernet TCP/IP option kit wired	$370.00
162178	Antenna extension kit, 5 ft	$415.00
148624	MSI-8000HD serial RS-232 cable	$115.00
158779	MSI-8000HD two each coil relay option kit, 250 VAC/30 VDC 5A or 100 VDC 0.4A	$315.00
158780	MSI-8000HD two each solid state relay option kit, 60 Vpk 2.7A	$315.00
158781	MSI-8000HD two each solid state relay option kit, 200 Vpk 0.9A	$315.00
149549	Universal 115/230 VAC 50/60 Hz (NA plug standard) battery charger for MSI-8000HD battery powered device	$135.00
149550	Universal 115/230 VAC 50/60 Hz (international plugs) battery charger for MSI-8000HD battery powered device	$130.00
171203	Audible alarm kit	$315.00
176963	Serial print cable	$135.00
Relays		
172490	Expanded Relay Kit, Four-Channel, 12A 5V, Latching Relays	$745.00
172492	Expanded Relay Kit, Four-Channel, 12A 5V, Momentary Relays	$725.00
Consult	Expanded Relay Kit, Four-Channel, 0.9A 200Vpk, AC/DC Solid State Relays	$750.00
172495	Expanded Relay Kit, Eight-Channel, 12A 5V, Momentary Relays	$750.00
172500	Expanded Relays Option Kit, Four-Channel, 3A, 60Vpk Solid State Form C Relays	$1,025.00
172501	Expanded Relays Option Kit, Eight-Channel, 3A 60Vpk, Solid State Form C Relays	$1,365.00
172502	Expanded Relays Option Kit, Eight-Channel, 0.9A 200Vpk, Solid State Form C Relays	$1,195.00
171676	Expanded Relays Option Kit, Eight-Channel, 12A 5V, Latching Relays	$805.00

INDICATORS / CONTROLLERS

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MSI-8004HD
Indicator/RF LED Remote Display

Standard Features

- IP65 rugged milled aluminum enclosure
- Backlit membrane keypad for user functioning and controls
- Tilt bracket included
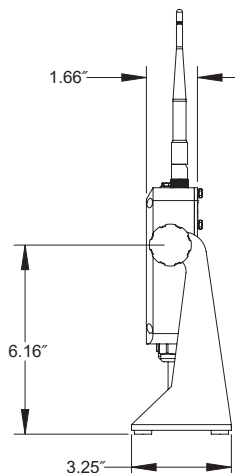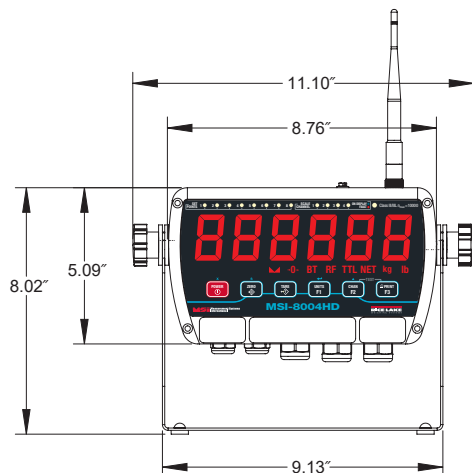- NTEP certified configuration

Options

- Expanded relay outputs
- Battery pack for mobile operation
- Second radio module for additional network connectivity

Approvals

Measurement
Canada
Approved

Specifications

Display:
Six-digit, 1.5 in (38 mm) LED display with red/green coloring

Enclosure:
NEMA Type 4, IP65 milled anodized aluminum

Keypad:
On/Off, Zero, Tare, Print and two user-defined keys

Functions:
Peak hold, high resolution, total, view total, net/gross, units switching

Units:
Pounds, kilograms, tons, metric tons, kilonewtons

Annunciators:
Stable, COZ, peak, kg, kN. lb, M, ton, setpoint, function LEDs

Channels:
1, 2, 3, 4, TTL

Power:
90-267 VAC, 9-36 VDC, 18-72 VDC, 120-300 VDC

Temperature:
-4° F to 140° F (-20° C to 60° C)

RF Remote Channels:
Up to 4 remote sensors monitored individually, in pairs or sum all (non-A/D version only) (when used with TranSend)

Service Counters:
A/D version only

A/D Inputs:
Four independent or summing load cell inputs

Excitation:
4.8 V current limited and over-voltage protected

Relays:
Two 5V coil, 250VAC, 5A relays

Filtering:
Off, Low, Hi-1, Hi-2

RF Radio Link:
2.4 GHz 802.15.4, optional second channel for Serial
RF, 802.11 Wi-Fi, cellular connectivity or Bluetooth®

RF Effective Range:
Typically 300 ft (91.44 m) line of sight

Data I/O:
Two RS-232 hard wired communication ports

Approvals:
NTEP COC #17-036 (-5° C to 40° C)
Measurement Canada

Warranty:
One-year limited warranty

Part Number/Price

Indicator		
Part #	**Description**	**Price**
178265	MSI-8004HD Indicator, 4CH AC, Red/Green 85~264VAC, 47~440Hz, 120~370VDC	$1,830.00
178269	MSI-8004HD Indicator, 4CH DC 8-32V, Red/Green Best for external 12V SLA Batteries	$1,865.00
178271	MSI-8004HD Indicator, 4CH DC 9-36V Iso, Red/Green Do not use on 12V Vehicle Systems	$1,945.00
178274	MSI-8004HD Indicator, 4CH DC 18-75V Iso, Red/Green	Consult
178278	MSI-8004HD Indicator, 4CH DC 5V, Red/Green For use with external 15W, 5V Power Supplies	Consult
183481	MSI-8004HD Indicator, 4CH 5V Red/Green with external rechargeable battery	$1,840.00
196904	MSI-8004HD Indicator, 4CH AC, Red/Green Instant Power-On, 85-264VAC	$2,025.00
Remote Display		
178281	MSI-8004HD Display, AC, Red/Green 85~264 VAC, 47~440 Hz, 120~370 VDC	$1,785.00
178283	MSI-8004HD Display, DC, 8-32V, Red/Green Best for external 12 V SLA Batter	$1,745.00
178285	MSI-8004HD Display, DC, 9-36V Iso, Red/Green Do not use on 12 V Vehicle Systems	$1,820.00
183479	MSI-8004HD Display, 4CH 5V Red/Green with external rechargeable battery	$1,580.00

Options

Part #	Description	Price
148624	Serial Cable, RS-232 9000 Serial Cable, DCE	$115.00
139309	Antenna Kit, Long Range Omni-directional, 9 dBi with 3 m Coax Intended for omni-directional mast mounting (up to 2" Ø). Beam-width. Must be mounted vertically.	$435.00
139310	Antenna Kit, Corner Reflector, 9 dBi with 3 m coax intended for directional wall or mast mounting (up to 2" Ø). Beam-width: 75° Elevation, 65° Azimuth	$430.00
139311	Antenna Kit, Corner Reflector, 12 dBi with 3 m coax intended for directional wall or mast mounting (up to 2" Ø). Beam-width: 50° Elevation, 36° Azimuth	$460.00
139312	Antenna Kit, YAGI, 15 dBi with 3 m coax highly directional wall or mast mounting (up to 2" Ø). Beam-width: 30° Elevation, 34° Azimuth	$355.00
139313	Antenna Kit, Vehicle Mount, 5 dBi with 5 m coax omni-directional. Mounts in 3/4" Hole.	$130.00
162178	Antenna extension kit, 5 ft	$415.00
197013	Antenna extension kit, 20 ft	$445.00
155173	Option kit, tilt stand	$75.00
171203	Audible alarm Not compatible with battery versions	$315.00
22436	Cable, Comm DB9F 9 Pin Fem One end stripped and tinned on other end 6' Pin 2 (Brown) Pin 3 (Red) Pin 5 (Yellow) For use with MSI-8004HD serial ports to connect to: Scoreboard displays, printers, computers & other equipment that supports RS-232	$65.00
183437	Battery, 5V Li-ion battery with USB power ports. Output 5V/3.0A per port (6.0 A max)Rate, 2A per port (4A if both ports are used)	$200.00
184132 *	8004 option kit, Bluetooth® with SMA antenna	Consult
184131	8004 option kit, WiFi with SMA antenna	$170.00
187424	8004 option kit, 2nd Xbee with TNC antenna	$180.00
182224	Power Adapter, 12VDC 5VDC Dual USB Car Charger plus 3 ft USB Cable	$50.00
Relays		
172500	Expanded Relays Option Kit, four-channel, 3A, 60VPK SSR form C	$1,025.00
172501	Expanded Relays Option Kit, eight-channel, 3A 60VPK, SSR form C	$1,365.00
Consult	Expanded Relays Option Kit, four-channel, 0.9A 200VPK, AC/DC SSR Form C	$750.00
172502	Expanded Relays Option Kit, eight-channel, 0.9A 200VPK, SSR form C	$1,195.00
172492	Expanded Relays Option Kit, four-channel, 12A 5V, momentary	$725.00
172495	Expanded Relays Option Kit, eight-channel, 12A 5V, momentary	$750.00
172490	Expanded Relays Option Kit, four-channel, 12A 5V, latching relays	$745.00
171676	Expanded Relays Option Kit, eight-channel, 12A 5V, latching relays	$805.00

* ScaleConnect app only works with certain Android devices. Please contact MSI for potential applications.

INDICATORS / CONTROLLERS

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MSI-9750A CellScale™ RF Portable Indicator

Standard Features

- Compatible with MSI-6260CS, MSI-9300 and MSI-9000 CellScale
- 1.4 in x 2.6 in (36 mm x 67 mm), eight line, 21 character LCD display
- 2.4 GHz spread spectrum transceiver
- Power supply: six cell NiMH battery pack
- Charger board: SMD NiMH fast charge (charges battery pack in two hours or less)
- RS-232 data I/O
- Real-time clock
- NEMA Type 3, IP55 enclosure
- AC adapter/battery charger; 90-264 VAC, 47-63 Hz (NA plug standard)

Approvals

Specifications

Enclosure:
NEMA Type 3, IP54 ,Rugged Molded PVC, O-ring gasketed.

Dimensions:
4.6in x 10.3in x 2.4 in (117 x 262 x 60.5 mm)

Weight:
2.2 lb (1 kg)

Keypad:
24 keys–11 key alphanumeric, 7 control keys and 6 user programmable keys.
Password protected with lock feature

Display:
1.4in x 2.6in (36 x 67 mm) backlight LCD capable of 8 lines, 21 characters each. Backlight selectable On, Off or Automatic. Red/Green LED battery charging indicator

Power:
Rechargeable 6 cell NiMH battery pack (AC Adapter/ Battery Charger Input Included)

Operating Time:
Up to 8 hours typical use. Selectable automatic shut off for battery conservation

Operating Temperature:
-4° to 158°F (-20° to 70°C)

Radio Link:
FHSS at 2.4 GHz (Up to 64 network selections)

Radio Effective Range:
Typically 500 ft (150 m) indoors, 1000 ft (300 m) outdoors with standard antennas

RFI/EMI Shielding:
Exceeds NIST HB44 and CE Standards

Connectors:
Charger Input: Standard 2.5 mm coaxial; RS-232: Standard DB-9 male

Warranty:
One-year limited

Approvals:
NTEP CC 05-077

Part Number/Price

Part #	MSI Part #	Description	Est. Weight	Price
138486	502541-0001	MSI-9750 RF portable indicator	2.2 lb (1 kg)	$1,980.00

Options/Accessories

Part #	MSI Part #	Description	Est. Weight	Price
Accessories				
143709	12431	Replacement NiMH battery pack	1 lb (0.45 kg)	$130.00
139484	503441-0001	AC adaptor/battery charger input, 90–264 VAC, 47–63 Hz (NA plug standard)	1 lb (0.45 kg)	$110.00
143912	12674	Battery charger, 12 VDC auto plug	1 lb (0.45 kg)	Consult
139485	503441-0002	AC adaptor/battery charger, EU plug	1 lb (0.45 kg)	Consult

MSI-9850 CellScale™ RF Digital Indicator

Specifications

Enclosure:
NEMA Type 4, IP65 milled anodized aluminum with O-ring gaskets
NEMA Type 6, IP67 with optional long-range antenna

Weight:
5.0 lb (2.8 kg)

Keypad:
33 keys–12 key alphanumeric, four cursor keys, seven control keys and 10 user programmable keys. Password protected with lock feature

Weight Display:
Six-digit, 1.2 in (30 mm) high numeric weight LED, four alphanumeric 0.5 in (13 mm) high data LED, six LED function select annunciators, 10 LED annunciators, Low battery LED indicator

Information Display:
1.4 in x 2.6 in (36 x 67 mm) backlit LCD. Capable of 8 lines of 21 characters each backlight selectable On, Off or Automatic

Power Input:
Internal AC/DC power supply: 85-265 VAC, 47-440 Hz/130-300 VDC
Also included: An independent 7-25 VDC power input (requires optional power/switch interface cable) 8 ft/2.4 m power cable included (NA plug standard)

Operating Temperature:
4°F to 158°F (-20°C to 70°C)

Radio Link:
FHSS at 2.4 GHz (up to 64 network selections)

Radio Link Effective Range:
Typically 500 ft (150 m) indoor, 1000 ft (300 m) outdoor with standard antennas.
See optional antennas for longer range.

Standard Antenna:
1/2 wave 2 dBi, articulated

RFI/EMI Shielding:
Exceeds NIST HB44 and CE Standards

Connectors:
RS-232, Turck compatible Pico connector

Warranty:
One-year limited

Approvals:
NTEP CC 05-077

Contact MSI for application consultation

Standard Features

- Compatible with MSI-6260CS, MSI-9300 and MSI-9000 CellScale
- Six-digit 1.2 in (30 mm) LED display
- 1.4 in x 2.6 in (36 mm x 67 mm) information LCD display
- 2.4 GHz spread spectrum transceiver
- RS-232 data I/O with real-time clock
- NEMA Type 4, IP65 enclosure
- Power input 85-265 VAC, 47-440 Hz / 130-300 VDC; 8 ft/2.4 m power cable included (NA plug standard)

Approvals

Options

- NTEP Certified
- Long range antenna, omni-directional with 9dBi
- Wi-Fi Ethernet connectivity (802.11b)
- Hard wired Ethernet output connection
- Single and dual 4-20 mA output, provides programmable current output
- Bar code scanner
- Setpoint relays, provides up to eight setpoint relay outputs for direct interfacing to external devices
- External audible alarm (activates with setpoint control)
- Universal mounting bracket for either desktop or wall/bulkhead mount
- Optional isolated and non-isolated DC power supplies

INDICATORS / CONTROLLERS

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MSI-9850 CellScale™ RF Digital Indicator

Part Number/Price

Part #	MSI Part #	Description	Est. Weight	Price
159625	N/A	MSI-9850 RF remote indicator AC/DC	10 lb (4.5 kg)	$2,640.00
162035	N/A	MSI-9850 RF remote indicator AC/DC International Power	10 lb (4.5 kg)	$2,640.00

Options/Accessories

Part #	MSI Part #	Description	Price
141558	10082	External setpoint relay output cable, 6.5 ft/2 m	$110.00
138358	502513-0001	RS-232, 13 ft/4 m cable with DB-9 connector	$110.00
176074		Cable, RS-232, serial output, with DB-9 connector, null modem	$135.00
138625	502598-0001	RF remote controller (control for On/Off, Zero, Tare and other functions. 10 m operating range)	$325.00
143466	12147	Long-range antenna, omni-directional with 9 dBi gain, includes 10 ft/3 m coaxial cable	$445.00
197013		Antenna extension kit, 20 ft	$445.00
Consult	Consult	9 dBi or 14 dBi gain corner reflector antenna	Consult
Consult	Consult	5 dBi gain vehicle/cab mount whip antenna, includes 17 ft/5.2 m coaxial cable	Consult
139032	502835-0001	Hard-wired Ethernet output connection, includes connector	$375.00
139033	502835-0002	Wi-Fi Ethernet connectivity (802.11b - contact factory for assistance)	$375.00
138615	Consult	Single 4-20 mA output. Provides programmable current output	$375.00
138616	Consult	Dual 4-20 mA output	Consult
Consult	Consult	Bar code scanner (several options available)	Consult
Consult	Consult	Internal setpoint relays, provides up to eight setpoint relay outputs for direct interfacing to external devices	Consult
Consult	Consult	Control kit, provides remote I/O relay board for interfacing to setpoints (note: I/O modules not included)	Consult
138628	502599-0001	External audible alarm (activates with setpoint control)	$400.00
138341	502488-0001	Universal mounting bracket for either desktop or wall / bulkhead mount (specify type)	$140.00
138351	502499-0001	Vehicle or wall mount bracket stand	$140.00
138631	502600-0003	Non-isolated 7-25 VDC power input, includes 13 ft/4 m non-terminated DC input cable	$140.00
138632	502600-0004	Isolated 10-36 VDC power input, includes 13 ft/4 m non-terminated DC input cable	$140.00
138633	502600-0005	Isolated 20-72 VDC power input, includes 13 ft/4 m non-terminated DC input cable	$220.00

Specifications

Enclosure:
NEMA Type 4, IP66

Display:
Six-digit long-life LED, 4 in or 6 in

Power:
AC/DC power supply 85-265 VAC, 47-440 Hz/130-300 VDC

Radio Link:
Direct sequence spread spectrum at 2.4 GHz

Radio Link Effective Range:
Typically 300 ft (150 m) with standard antennas (see optional antennas for longer range)

Standard Antenna:
1/2 wave 2 dBi, articulated

Warranty:
One-year limited

Echo Data Output:
RS-232

Standard Features

- Tilt mounting bracket
- Integrated data repeater
- AC/DC power supply: 85-265 VAC, 47-440 Hz/130-300 VDC
- RF telemetry via 2.4 GHz modem (certain part numbers only)
- Six high-intensity red digits (double-row discrete LED)
- Auto Learn mode of communication protocols
- Hold displayed weight (demand input)
- Software selectable standstill mode for no updates while in motion
- Durable weather tight IP66 enclosure
- Adjustable daylight/night intensity
- Non-glare contrast filtered lens
- Mirror (reverse image) feature
- RS-232, 20 mA and RS-485 communications
- Scale Core RF (certain models only)
- Auto sensing 115/230 VAC power supply
- PEMs for VESA flat-wall mount or side-mounting flange available
- Polyethylene breather vent inhibits internal moisture buildup

Part Number/Price

Part #	Description	Est. Weight	Price
178004	LaserLight2, 4 in with ScaleCore RF and tilt bracket		$2,135.00
178006	LaserLight2, 6 in with ScaleCore RF and tilt bracket		$2,545.00
178341	Laserlight2, 4 in with tilt bracket		$2,030.00
178342	Laserlight2, 6 in with tilt bracket		$2,420.00

Options/Accessories

Part #	Description	Est. Weight	Price
139309	Long range antenna, 300 m-500 m omni-directional with 9 dBi gain, includes 10 ft/3 m coaxial cable	1 lb	$435.00
139310	9 dBi gain corner reflector antenna	1 lb	$430.00
139311	12 dBi gain corner reflector antenna	1 lb	$460.00
139313	5 dBi gain vehicle/cab mount whip antenna	1 lb	$130.00
162178	Antenna extension kit, 5 ft		$415.00
197013	Antenna extension kit, 20 ft		$445.00

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MSI Scoreboards Wireless RF
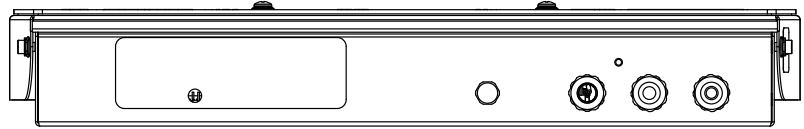
Featuring LaserLight2 Remote Displays

Dimensions			
22-inch enclosure (4-inch model)			
A	22.28 in (565 mm)	C	3.28 in (85 mm)
B	10.96 in (280 mm)	D	9.80 in (250 mm)
31-inch enclosure (6-inch model)			
A	30.63 in (780 mm)	C	3.73 in (95 mm)
B	13.94 in (355 mm)	D	12.77 in (325 mm)
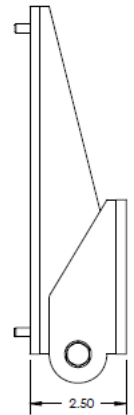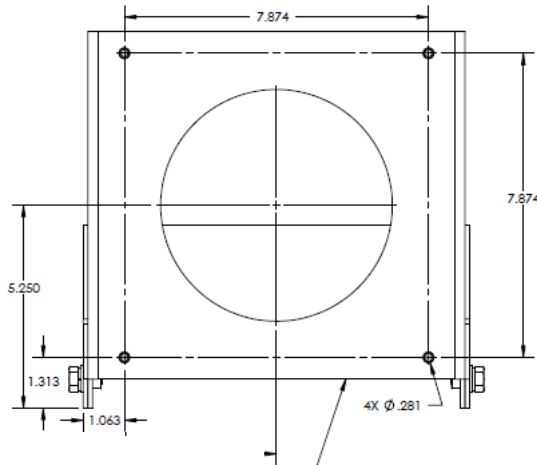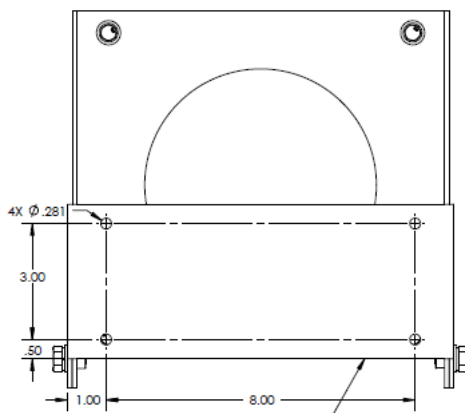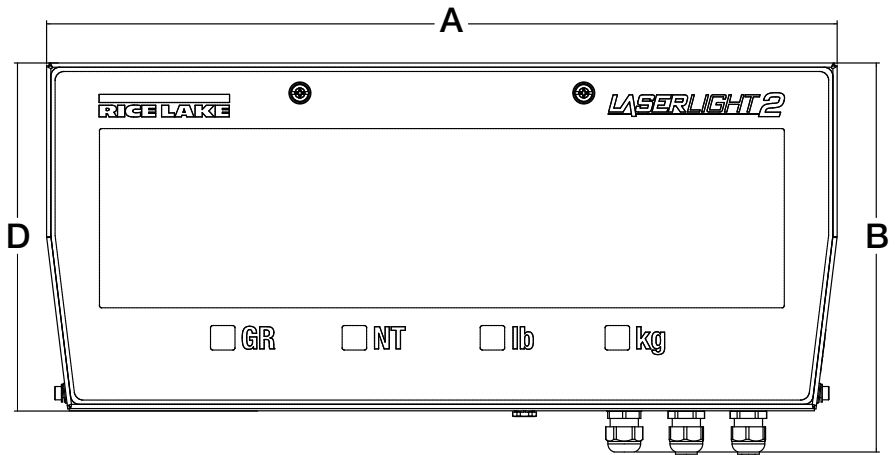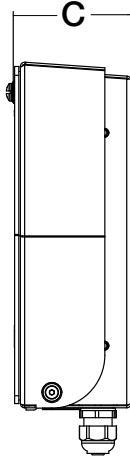
THIS BRACKET ATTACHES
TO THE WALL
(BOLTS NOT INCLUDED)

THIS BRACKET ATTACHES
TO THE LASERLIGHT DISPLAY

4X Ø .281

3.00

.50

1.00   8.00

7.874

7.874

5.250

1.313

1.063

4X Ø .281

2.50

TranSend™
Wireless Load Cell Interface System
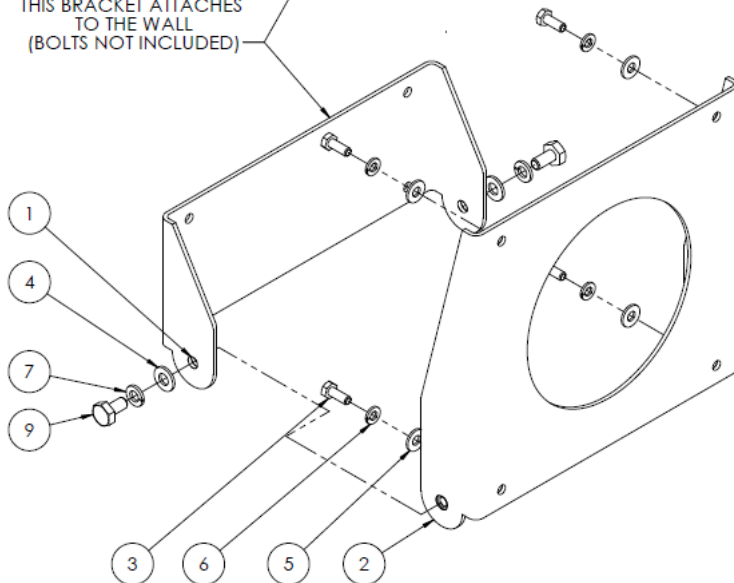
Specifications

Power:
5-6 VDC, 7-36 VDC 85-265 VAC

Excitation Voltage:
Transmitter: +4.8 VDC, 16x 350Ω or 32x 700Ω load cells

Standard Antenna:
1/2 wave 2dBi, articulated

Frequency:
Direct sequence spread spectrum at 2.4 GHz, 802.15.4

Effective Range:
100 ft or more

Digital I/O:
Three coil relays available on select models and 7000HD units

Circuit Protection:
RFI, EMI, ESD protection

Serial Port:
Full duplex RS-232

Operating Temperature:
-40°F to 185°F (-40°C to 85°C)

Enclosure:
NEMA Type 4 (IP66), aluminum black powder coated (excludes wall cube model) 7000HD and 7001HD: IP68

Additional RF Options:
Wi-Fi
Bluetooth®
Cellular (consult)
802.15.4 FHSS

Warranty:
One-year limited warranty

MSI-7000HD

TranSend

Standard Features

- Works with any basic digital weight indicator
- Excitation to load cell(s) provided by the transmitter, not the indicator
- Each transmitter/receiver set is individually paired
- Auto-off mode - selectable for 15, 30, 45, 60 minutes or off
- Auto-sleep mode - power down during non-use, power up with weight change or key press
- Serial communication cable included with all transmitters

Additional HD Features

- IP68 milled aluminum enclosure
- Second radio modem available

Part Number/Price

Part #	Description	Est. Weight	Price
Transmitters			
5-6 VDC Power Input			
160330	Single-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	$840.00
159207	Four-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	$890.00
161949	Four-channel transmitter, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	$1,015.00
176644 *	Single-channel transmitter, no relays, Bluetooth	2 lb	Consult
176638 *	Four-channel transmitter, no relays, Bluetooth	2 lb	Consult
176641 *	Four-channel transmitter, includes three coil relays, Bluetooth	2 lb	Consult
176655	Single-channel transmitter, no relays, Wi-Fi	2 lb	$885.00
176648	Four-channel transmitter, no relays, Wi-Fi	2 lb	$935.00
176652	Four-channel transmitter, includes three coil relays, Wi-Fi	2 lb	$1,065.00
7-36 VDC Power Input			
160329	Single-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	$890.00
159470	Four-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	$915.00
161951	Four-channel transmitter, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	$1,060.00
176645 *	Single-channel transmitter, no relays, Bluetooth	2 lb	Consult
176639 *	Four-channel transmitter, no relays, Bluetooth	2 lb	Consult
176642 *	Four-channel transmitter, includes three coil relays, Bluetooth	2 lb	Consult
176656	Single-channel transmitter, no relays, Wi-Fi	2 lb	$935.00
176650	Four-channel transmitter, no relays, Wi-Fi	2 lb	$960.00
176653	Four-channel transmitter, includes three coil relays, Wi-Fi	2 lb	$1,120.00
85-265 VAC Power Input			
160328	Single-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	$915.00
159469	Four-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	$940.00
161950	Four-channel transmitter, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	$1,095.00
176643 *	Single-channel transmitter, no relays, Bluetooth	2 lb	Consult
176637 *	Four-channel transmitter, no relays, Bluetooth	2 lb	Consult
176640 *	Four-channel transmitter, includes three coil relays, Bluetooth	2 lb	Consult
176654	Single-channel transmitter, no relays, Wi-Fi	2 lb	$960.00
176647	Four-channel transmitter, no relays, Wi-Fi	2 lb	$990.00
176651	Four-channel transmitter, includes three coil relays, Wi-Fi	2 lb	$1,150.00

INDICATORS / CONTROLLERS

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TranSend™
Wireless Load Cell Interface System

Part Number/Price

Part #	Description	Est. Weight	Price
Receivers			
5-6 VDC Power Input			
160337	Single channel receiver to provide a mV signal to a digital weight indicator, RF 802.15.4, 2.4 GHz	2 lb	$890.00
160334	Single channel receiver to provide an analog output signal: 4-20 mA, 0-20 mA, 0-5 VDC, 0-10 VDC, ±5 VDC, ±10VDC, RF 802.15.4, 2.4 GHz	2 lb	$940.00
160016	Four channel receiver to provide an analog output signal: 4-20 mA, 0-20 mA, 0-5 VDC, 0-10 VDC, ±5 VDC, ±10VDC, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	$1,065.00
161941	Single channel receiver to provide RS232 serial output	2 lb	$695.00
160017	Four channel receiver to provide RS232 serial output	2 lb	$1,080.00
7-36 VDC Power Input			
160336	Single channel receiver to provide a mV signal to a digital weight indicator. RF 802.15.4, 2.4 GHz	2 lb	$965.00
161939	Single channel receiver to provide RS232 serial output	2 lb	$795.00
160333	Single channel receiver to provide an analog output signal: 4-20 mA, 0-20 mA, 0-5 VDC, 0-10 VDC, ±5 VDC, ±10 VDC, RF 802.15.4, 2.4 GHz	2 lb	$1,065.00
159478	Four channel receiver to provide RS232 serial output	2 lb	$1,125.00
159476	Four channel receiver to provide an analog output signal: 4-20 mA, 0-20 mA, 0-5 VDC, 0-10 VDC, ±5 VDC, ±10 VDC, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	$1,195.00
85-265 VAC Power Input			
160335	Single channel receiver to provide a mV signal to a digital weight indicator, RF 802.15.4, 2.4 GHz	2 lb	$1,010.00
161938	Receiver to provide RS232 serial output	2 lb	$850.00
160332	Single channel receiver to provide an analog output signal: 4-20 mA, 0-20 mA, 0-5 VDC, 0-10 VDC, ±5 VDC, ±10 VDC, RF 802.15.4, 2.4 GHz	2 lb	$1,120.00
159477	Four channel receiver to provide RS232 serial output	2 lb	$995.00
159475	Four channel receiver to provide an analog output signal: 4-20 mA, 0-20 mA, 0-5 VDC, 0-10 VDC, ±5 VDC, ±10 VDC, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	$1,295.00
7000HD:			
177942	MSI-7000HD 4CH 85-265VAC, Three Coil Relays, 802.15.4		$1,920.00
177944	MSI-7000HD 4CH 7-36VDC, Three Coil Relays, 802.15.4		$1,885.00
177945	MSI-7000HD 4CH 9-36VDC Iso, Three Coil Relays, 802.15.4		$1,955.00
177950 *	MSI-7000HD 4CH 85-265VAC, Three Coil Relays, Bluetooth®		Consult
177952 *	MSI-7000HD 4CH 7-36VDC, Three Coil Relays,Bluetooth		Consult
177953 *	MSI-7000HD 4CH 9-36VDC Iso, Three Coil Relays,Bluetooth		Consult
177995	MSI-7000HD 4CH 85-265VAC, Three Coil Relays, WiFi		$1,935.00
177997	MSI-7000HD 4CH 7-36VDC, Three Coil Relays, WiFi		$1,895.00
177998	MSI-7000HD 4CH 9-36VDC Iso, Three Coil Relays, WiFi		$1,980.00
7001HD			
178021	MSI-7001HD 2CH 85-265VAC, 802.15.4		$1,150.00
178010	MSI-7001HD 2CH 5-6VDC, 802.15.4		$1,040.00
178011	MSI-7001HD 2CH 7-36VDC, 802.15.4		$1,115.00
178012	MSI-7001HD 2CH 9-36VDC Isolated, 802.15.4		$1,125.00
178013 *	MSI-7001HD 2CH 85-265VAC, Bluetooth		Consult
178014 *	MSI-7001HD 2CH 5-6VDC, Bluetooth		Consult
178015 *	MSI-7001HD 2CH 7-36VDC, Bluetooth		Consult
178016 *	MSI-7001HD 2CH 9-36VDC Isolated, Bluetooth		Consult
178017	MSI-7001HD 2CH 85-265VAC, WiFi		$1,175.00
178018	MSI-7001HD 2CH 5-6VDC, WiFi		$1,125.00
178019	MSI-7001HD 2CH 7-36VDC, WiFi		$1,135.00
178020	MSI-7001HD 2CH 9-36VDC Isolated, WiFi		$1,200.00

* Bluetooth modems only work with certain Android devices. Please contact MSI for potential applications.

Options/Accessories

Part #	Description	Price
162172	Charger, TranSend™ for 6V SLA battery	$60.00
162173	Battery, TranSend 6V SLA	$105.00
162175	Enclosure, TranSend for 6V SLA battery	$300.00
150964	RS-232 13 ft (4 m) serial cable with nine-pin (female) connector	$170.00
150965	RS-232 13 ft (4 m) serial cable with nine-pin (male) connector	$170.00
160109	AC adaptor, TranSend 6V	$50.00
162178	Antenna extension kit, 5 ft coax cable	$415.00
139309	Antenna kit, long range Omni with 3 m coax cable	$435.00
139310	Antenna kit, corner reflector 9 dbi with 3 m coax cable	$430.00
197013	Antenna extension kit, 20 ft	$445.00

Options/Accessories

Part #	Description	Price
139311	Antenna kit, corner reflector 12 dbi with 3 m coax cable	$460.00
139312	Antenna kit, Yagi 15 dbi with 3 m coax	$355.00
144345	30 m coaxial cable, for use with non-vehicle mount antenna kits	$405.00
139313	Antenna kit, vehicle mount. 5 dbi with 5 m coaxial cable	$130.00
187428	Dual xBee option kit for 7000HD	$205.00
162177	Cordset, TranSend, pre-wired for use with single channel transmitters or non-relay based receivers	$110.00
162184	Load cell connector, TranSend, Field wireable, 4-6 mm straight. For use with single channel transmitters and all receivers.	$55.00
162185	Load cell connector, TranSend, Field wireable, 6-8 mm straight. For use with single channel transmitters and all receivers.	$55.00
162186	Load cell connector, TranSend, Field wireable, 4-6 mm right angle. For use with single channel transmitters and all receivers.	$55.00
162187	Load cell connector, TranSend, Field wireable, 6-8 mm right angle. For use with single channel transmitters and all receivers.	$55.00
143531	Power cord, 6 V SLA battery charger EU	$25.00
143533	Power cord, 6 V SLA battery charger, Australia	$45.00
143534	Power cord, 6 V SLA Battery charger, UK	$40.00
160110	265 VAC to 6 VDC wall adapter US/UK/EU/AUS/China	$50.00
145085	RS-232 serial cable, nine-pin unterminated	$110.00
164865	Cable, 4 m, one-channel, mV/V output, LC input	$135.00
165648	Cable, 5 m, one-channel, mV/V output, LC input	$135.00
165651	Cable, 10 m, one-channel, mV/V output, LC input	$195.00
145084	Cable, 2 m, one-channel, analog output	$55.00
144400	Cable, 5 m, one-channel, analog output	$85.00
168903	Cable, 10 m, one-channel, analog output	$125.00
Consult	Straight connector, analog output, field wire able, 4-6 mM OD	Consult
Consult	Straight connector, analog output, field wire able, 6-8 mM OD	Consult
Consult	Right angle connector, analog output, field wire able, 4-6 mM OD	Consult
Consult	Right angle connector, analog output, field wire able, 6-8 mM OD	Consult
184002	7000HD Half-plate mounted, FHSS, DC (battery) powered (half plate battery power supply sold separately)	Consult
182244	GoDex portable printer (compatible with android tablet app)	Consult

INDICATORS / CONTROLLERS

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MSI-9000 CellScale™

Standard Features

- 2.4 GHz frequency hopping spread spectrum
- Two scale inputs and excitation with remote sensing (see accessories formatting connector)
- Power/switch cable, 13 ft (4 m) for 9-30 VDC input with two programmable switch inputs
- RS-232, RS-422 and RS-485 I/O with 13 ft (4 m) interface cable
- Three internal solid state relays for setpoint control
- Real-time clock
- NEMA Type 4, IP65 enclosure (NEMA Type 6, IP67 with long -range antenna)

Approvals

NTEP

Measurement
Canada
Approved

Specifications

Enclosure:
NEMA Type 4, IP65 milled anodized aluminum with O-ring gaskets
NEMA Type 6, IP67 with optional long range antenna

Weight:
3.5 lb (1.6 kg)

Annunciators:
8 LED status lamps for Power, Setpoints, Comm Port, Excitation & RF Modem

Real-Time Clock:
USA or European format programmable

Power Input:
9-30 VDC (Internal 85-265 VAC power supply optional)

Operating Temperature:
-4°F to 158°F (-20°C to 70°C)

Scale Inputs:
2 sensor inputs and 6 terminal connections

Excitation:
5 V (+5 V relative to ground)

Calibration:
Digital via input comport or RF with other CellScale weighing components.
Programmable calibration settings, include: AZM, Motion, Filter, Zero, Units, Capacity and Divisions

Digital Filtering:
Two-stage programmable digital filtering

Totalization, Statistics and Product IDs:
Push-button or automatic with each ID register. Up to 32 alphanumeric ID registers

Radio Link:
FHSS at 2.4 GHz (up to 64 network selections)

Radio Link Effective Range:
Typically 500 ft (150 m) indoor, 1,000 ft (300 m) outdoor with standard antennas. (See optional antennas for longer range)

Standard Antenna:
1/2 wave 2dBi, articulated

RFI/EMI Shielding:
Exceeds NIST HB44 and CE Standards

Data I/O:
2 programmable comports supporting RS-232 or RS-422

Push Button Inputs:
2 inputs on power connector and 1 isolated input on setpoints connector

Connectors:
12-pin MIL-C-26482 for load sensor input Turck compatible Pico for RS-232 output

Math Channels:
8 math channels programmable for arithmetic formula processing

Internal Setpoints:
3 60 V at 350 mA internal programmable solid state relay contacts

Warranty:
One-year limited

Approvals:
NTEP CC 05-077

Part Number/Price

Part #	MSI Part #	Description	Est. Weight	Price
138366		Two channel A/D 85-265VAC 47-440Hz, 130-300VDC, 7-25VDC (consult factory for other configurations)		$3,300.00

Options/Accessories (Contact MSI for application consultation)

Part #	MSI Part #	Description	Price
Consult	Consult	NTEP Certified (contact factory for specifications)	Consult
Consult	Consult	Internal AC/DC power supply (85-265 VAC, 47-440 Hz/130-300 VDC) includes a separate, independent 9-30 VDC power input	$320.00
137467	Consult	External 85-265 VAC, 47-440 Hz/130-300 VDC power supply for indoor and outdoor installations	$530.00
144331	Consult	Five dBi gain vehicle/cab mount whip antenna, includes 17 ft/5.2 m coaxial cable	$65.00
Consult	Consult	Single or dual 4-20 mA output. Provides programmable current output for direct connection to PLC's and other data acquisition equipment. Note: See 4-20 mA option specification sheet for available product configurations	$490.00 $540.00
144091	Consult	Non-terminated 4-20 mA cord set, 13 ft/4 m (longer lengths available by special order)	$105.00
143343	Consult	Setpoints output cable, 13 ft/4 m for access to internal SS relays	Consult
Consult	Consult	Non-terminated serial cable for communication port connection, 13 ft/4 m (longer lengths available by special order)	$105.00
Consult	Consult	Pre-wired load cell cable (various lengths for single and dual channel available)	Consult
Consult	Consult	Second A/D module (4 scale inputs - adds second 12-Pin connector)	$645.00
Consult	Consult	CellScale Virtual Monitor (CVM) application software (enables PC to emulate scale indicator., contact factory for assistance)	Consult
Consult	Consult	Modem only equipped version (CellScale A/D removed)	$490.00
Consult	Consult	Non-RF equipped version (CellScale RF modem removed)	$920.00
137096	Consult	MSI-9002 breakout/summing box; 4 in (1 out or 4 in (2 out)	$780.00
137370	Consult	MSI-9008 multiplexer; 8 in (1 out (expands single channel into 8)	$1,175.00
Consult	Consult	Wi-Fi Ethernet Connectivity (802.11b - contact factory for assistance)	$380.00
143297	Consult	12-Pin mating connector for single or dual scale input	$60.00
Consult	Consult	Long range antenna, 300-500 m omni-directional with 9 dBi gain, includes 10 ft/3 m coaxial cable	Consult
143466	12147	Antenna, 9 dBi	$445.00
144330	13205	Antenna, 9 dBi corner reflector	Consult
144329	13204	Antenna, 14 dBi corner reflector	Consult
144334	13209	Antenna cable, 3 m	$60.00
143977	12750	Antenna, YAGI, 15 dBi	Consult
144332	13207	Vehicle antenna cable	$132.00
148624	501705-0001	Serial cable DB9	$115.00
150990		RF Remote option (must be ordered with PN 153549 to work properly)	$930.00

MSI-9020 CellScale™ RF CellModem

Specifications

Enclosure:
NEMA Type 4, IP65 milled anodized aluminum with O-ring gaskets
NEMA Type 6, IP67 with optional long range antenna

Weight:
3.5 lb (1.6 kg)

Annunciators:
3 LED status lamps for Power, Data TX/RX and Configuration

Power Input:
9-30 VDC (Internal 85-265 VAC, 47-440 Hz power supply optional)

Operating Temperature:
-4°F to 158°F (-20°C to 70°C)

Radio Link:
FHSS at 2.4 GHz (up to 64 network selections)

Radio Link Effective Range:
Typically 500 ft (150 m) indoor, 1000 ft (300 m) outdoor with standard antennas.
(See optional antennas for longer range)

Standard Antenna:
1/2 wave 2dBi, articulated

RFI/EMI Shielding:
Exceeds NIST HB44 and CE Standards

Data I/O:
1 Comm Port with two connector interfaces for RS-232 and RS-422

Warranty:
One-year limited

Approvals:
NTEP CC 05-077

Standard Features

- Modem only component; provides serial interface with computers, printers and scoreboards to a CellScale network
- 2.4 GHz spread spectrum frequency hopping
- Power cable, 13 ft (4 m) for 9-30 VDC input
- One communication port; RS-232 or RS-422, 13 ft (4 m) interface cable
- NEMA Type 4, IP65 enclosure (NEMA Type 6, IP67 with long range antenna)

Approvals

Part Number/Price

Part #	MSI Part #	Description	Est. Weight	Price
138477	502536-0001	MSI-9020 RF CellModem, DC power	7 lb (3.5 kg)	$2,425.00
138478		MSI-9020 RF CellModem, AC/DC power		Consult

Options/Accessories

Part #	MSI Part #	Description	Est. Weight	Price
Consult	Consult	Internal 85-265 VAC, 47-440 Hz power supply	-	$320.00
143466	12147	Long range antenna, 300 m-500 m omni-directional with 9 dBi gain, includes 10 ft/3 m coaxial cable	1 lb (0.45 kg)	$445.00
Consult	Consult	9 dBi or 14 dBi gain corner reflector antenna	1 lb (0.45 kg)	Consult
Consult	Consult	5 dBi gain vehicle/cab mount whip antenna, includes 17 ft/5.2 m coaxial cable	1 lb (0.45 kg)	Consult
137567	502046-0001	Non-terminated serial cable for communication port connection, 13 ft/4 m longer lengths available by special order	1 lb (0.45 kg)	$110.00
Consult	Consult	CellScale Virtual Monitor (CVM) application software (enables PC to emulate scale indicator)	Consult	Consult

SCT-1100 and SCT-2200
Signal Conditioning Transmitter/Indicator

APPROVALS

c(UL)us LISTED

SCT1100-AN with Analog Output

APPROVALS

c(UL)us LISTED

SCT2200 with EtherNet/IP Fieldbus Module

	SCT-1100 Specifications	SCT-2200 Specifications
Power	12/24 VDC, Power Consumption: 70 mA min – 100 mA max	12/24 VDC, Power Consumption: 70 mA min – 100 mA max
Excitation Voltage	5VDC, 120 mA, 8 x 350 Ω	5 VDC, 120 mA, 8 x 350 Ω
Analog Signal Input Range	± 39 mV	± 39 mV
Analog Signal Sensitivity	0.03 µV/graduation minimum 0.3 µV/graduation recommended	0.03 µV/graduation minimum 0.3 µV/graduation recommended
A/D Sample Rate	Four channel A/D 24-bit sigma-delta conversion, up to 200 conv. /sec. auto select	One channel A/D 24-bit sigma-delta conversion, up to 200 conv. /sec. auto select
Resolution	Internal resolution: 1.5 million counts Weight display resolution: 800,000	Internal resolution: 1.5 million counts Weight display resolution: 800,000
Digital Inputs/Outputs	Two inputs: 12/24 VDC Two outputs:150 mA 48 VAC/ 150 mA 60 VDC	Two inputs: 12/24 VDC Two outputs:150 mA 48 VAC/ 150 mA 60 VDC
Serial Port	(1) RS-485, (1) RS-232	(1) RS-485, (1) RS-232
Analog Output (if equipped)	Opt isolated, 16-bit 0-20mA, 4-20mA (Maximum 350 ohm) 0-5VDC, 0-10VDC (Minimum 10,000 ohm)	Opt isolated, 16-bit 0-20mA, 4-20mA (Maximum 350 ohm) 0-5VDC, 0-10VDC (Minimum 10,000 ohm)
Display	Six-digit 0.51 in (13 mm), red LED Annunciators: Net, center of zero, stability	Six-digit 0.31 in (8 mm), red LED Annunciators: Net, center of zero, stability
Keyboard	Five key, membrane panel, tactile feel Zero (Down), Tare (Up), Mode (Right), Print (Enter), C (On/Off)	Five key, tactile feel Zero (Down), Tare (Up), Mode (Right), Print (Enter), C (On/Off)
Temperature & Humidity	Working Temperature: -15° C to 40° C (5° F to 104° F) Humidity: 85% non-condensing	Working Temperature: -10° C to 50° C (14° F to 122° F) Humidity: 85% non-condensing
Dimensions (W x H x D)	4.17 in x 3.54 in x 2.28 in (106 mm x 90 mm x 58 mm)	0.98 in x 4.52 in x 4.72 in (25 mm x 115 mm x 120 mm)
Weight	1 lb (0.5 kg)	1 lb (0.5 kg)
Rating/Material	NEMA Type 1 plastic pluggable connectors	NEMA Type 1 plastic pluggable connectors
Warranty	One-year limited warranty	One-year limited warranty

Standard Features

- Up to four independent scales or four load cell inputs
- Quick menu for real and theoretical calibration
- Red LED display (13mm) and six LEDs show active functions
- Standard DIN rail-mounting with power supply and enclosures
- Configurable calibration and setup parameters from keyboard
- Up to three calibration linearization points or three from the keyboard
- Reading of the net, gross and tare weights, clearing, semi-automatic and presettable tare, scale switch, setting of outputs application thresholds
- Diagnostic information via serial port, message display, printing, setting of APW in counting mode, simulation of key pressure

Standard Features

- HUB Mode connects up to 16 transmitters to one fieldbus
- Quick menu for real and theoretical calibration
- Web browser weight monitoring and calibration over EtherNet/IP, Profinet and Modbus TCP network
- Red LED display with six-digits (8 mm) and six LEDs show active functions
- Standard DIN rail- mounting with power supply and enclosures
- Configurable calibration and setup parameters from keyboard
- Up to three calibration linearization points or three from the keyboard
- Reading of the net, gross and tare weights, clearing, semi-automatic and presettable tare, scale switch, setting of outputs application thresholds
- Diagnostic information via serial port, message display, printing, setting of APW in counting mode, simulation of key pressure, Modbus RTU
- Double RS-485 port for a quick network connection
- Printer management on second serial port available
- Multi-range function allows for subdividing the scale capacity in two, each up to 3,000 divisions

RICE LAKE

SCT-3300
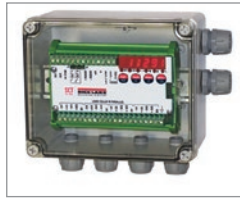Signal Conditioning Transmitter/Indicator
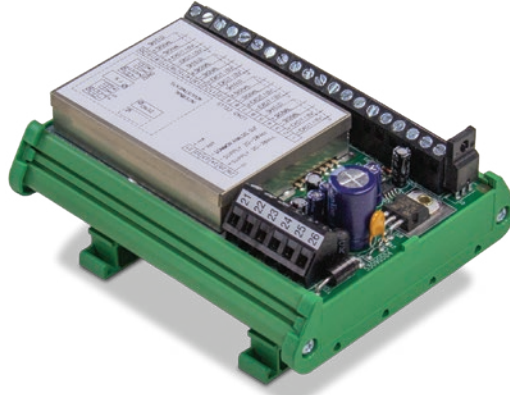
SCT-3300 Specifications	
Power	Input: 20-28 VDC Power consumption: 8 W
Excitation Voltage	10 VDC, 170 mA, 6 x 350 Ω
Analog Signal Input Range	3.5 to 24 mV
Analog Signal Sensitivity	0.1 µV/graduation minimum 1.0 µV/graduation recommended
A/D Sample Rate	300 Hz
Resolution	System linearity: ± 0.01% full scale
Analog Output (if equipped)	Optoisolated 0-20 mA, 4-20 mA (max 300 ohm) 0-10 VDC (min 10,000 ohm)
Temperature & Humidity	Working temperature: 14° F to 122° F (-10° C to 50° C) Humidity: 85% non-condensing
Dimensions (W x H x D)	4.56 in x 3.72 in x 2.4 in (114 mm x 93 mm x 60 mm)
Weight	0.5 lb (0.2 kg)
Rating/Material	DIN rail mount: NEMA Type 1
Warranty	One-year limited warranty

Standard Features

- Powers up to six (350 ohm) load cells in parallel
- Analog amplifier and transmitter
- Analog output: 0-20 mA, 4-20 mA, 0-10 V
- Mounting on Omega/DIN rail for back panel or junction box
- IP67-rated enclosed versions

SCT-10 and SCT-20
Signal Conditioning Transmitter/Indicator

SCT-10 in Plastic Enclosure

APPROVALS
c (UL) us
LISTED

APPROVALS
c (UL) us
LISTED
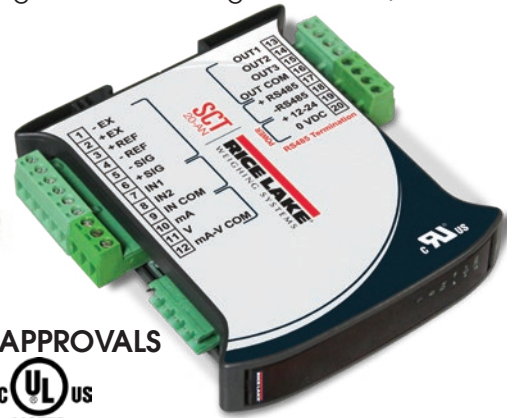
	SCT-10 Specifications	SCT-20 Specifications
Power	Input: 12 -24 VDC Power consumption: 5 W	Input: 12 -24 VDC Power consumption: 5 W
Excitation Voltage	5 VDC, 120 mA, 8 x 350 Ω	5 VDC, 120 mA, 8 x 350 Ω
Analog Signal Input Range	± 19.5 mV	±39 mV
Analog Signal Sensitivity	0.1 µV/graduation minimum 1.0 µV/graduation recommended	0.1 µV/graduation minimum 1.0 µV/graduation recommended
A/D Sample Rate	80 Hz	300 Hz
Resolution	Internal resolution: 16 million counts Weigh display resolution: 999,999 System linearity: ± 0.01% full scale	Internal resolution: 16 million counts Weight display resolution: 999,999 System linearity: ± 0.01% full scale
Digital Inputs/Outputs	2 inputs 5-24 VDC, 2 outputs 24 VDC/60 mA N.O. or N.C. (solid state)	2 inputs 5-24 VDC, 3 outputs 115 VDC/150 mA N.O. or N.C. (dry contact)
Serial Port	RS-485 or RS-232 simplex supports up to 115,200 bps	RS-485 or RS-232 simplex supports up to 115,200 bps
Analog Output	Optoisolated, 16 bit 0-20 mA, 4-20 mA (max 300 ohm) 0-10 VDC, 0-5 VDC, -10 to 10VDC, 5 to 5VDC, (min 10,000 ohm)	Optoisolated, 16 bit 0-20 mA, 4-20 mA (max 300 ohm) 0-10 VDC, 0-5 VDC (min 10,000 ohm)
Display	0.3 in (8 mm), 6-digit, 7-segment LED Annunciators: Net, center of zero, stability, KG, G, LB Annunciators test status of inputs/outputs	0.3 in (8 mm), 6-digit, 7-segment LED Annunciators: Net, center of zero, stability, KG, G, LB
Keyboard	Four-key membrane panel, tactile feel Zero, Tare, Print, Menu, Escape, Left and Up navigation, Enter	Four-key membrane panel, tactile feel Zero, Tare, Print, Menu, Escape, Left and Up navigation, Enter
Temperature & Humidity	Working temperature: -4° F to 140° F (-20° C to 60° C) Humidity: 85% non-condensing	Working temperature: -4° F to 140° F (-20° C to 60° C) Humidity: 85% non-condensing
Dimensions (W x H x D)	DIN Rain Mount (W x H x D): 4.84 in x 3.62 in x 1.96 in (123 mm x 92 mm x 50 mm) IP67 Enclosure (W x H x D): 6.69 in x 5.51 in x 3.74 in (170 mm x 140 mm x 95 mm)	SCT converter (W x H x D): 0.98 in x 4.52 in x 4.72 in (25 mm x 115 mm x 120 mm)
Weight	1 lb (0.5 kg)	1 lb (0.5 kg)
Rating/Material	DIN rail mount: NEMA Type 1 Sealed enclosure: NEMA Type 4/IP67, plastic enclosure, clear cover, six PG9 cord grips	SCT enclosure: NEMA Type 1 plastic pluggable connectors
Warranty	One-year limited warranty	One-year limited warranty

Standard Features

- Converts digital weight to analog output
- Sums four input channels in parallel
- Theoretical calibration, real-weigh calibration, linearity calibration
- Push button or preset tare
- Full-scale analog output with zero setting and PLC correction of analog signal
- Displays weight, configuration, calibration and error conditions
- DIN-rail mounting, suitable for back panel
- Two digital inputs, two digital outputs
- One serial port, RS-232 simplex and RS-485 connection
- Supports ASCII or MODBUS-RTU protocols
- CD manual

Standard Features

- Space saving, vertical shape with DIN-rail mounting
- Displays weight, configuration, calibration and error conditions
- Theoretical calibration, real-weigh calibration, linearity calibration
- Push button or preset tare
- Converts digital weight to analog output or optional DeviceNet™ or Profibus ™ or EtherNet/IP™ protocol
- Supports ASCII or MODBUS-RTU protocols
- Full-scale analog output with zero setting and PLC correction of analog signal
- Bit swapping selection for little endian and big endian format
- Two digital inputs, three digital outputs
- One serial port, RS-232 simplex and RS-485 connection
- CD manual

RICE LAKE

SCT-30 and SCT-40
Signal Conditioning Transmitter/Indicator

APPROVALS

c (UL) us
LISTED

SCT converter with analog output

APPROVALS

c (UL) us
LISTED

	SCT-30 Specifications	SCT-40 Specifications
Power	Input: 12 -24 VDC Power consumption: 3W	Input: 12 -24 VDC Power consumption: 5W
Excitation Voltage	5 VDC, 120 mA, 8 x 350 Ω	5 VDC, 240 mA, 16 x 350 Ω
Analog Signal Input Range	± 39 mV	±39 mV
Analog Signal Sensitivity	0.1 µV/graduation minimum 1.0 µV/graduation recommended	0.1 µV/graduation minimum 1.0 µV/graduation recommended
A/D Sample Rate	300 Hz	600 Hz
Resolution	Internal resolution: 16 million counts System linearity: ± 0.01% full scale	Internal resolution: 16 million counts Weight display resolution: 999,999 System linearity: ± 0.01% full scale
Digital Inputs/Outputs	N/A	3 inputs 5-24 VDC, 5 outputs, 115 VAC/150 mA
Serial Port	RS-485	RS-485 or RS-232 simplex supports up to 115,200 bps
Analog Output (if equipped)	Optoisolated, 16 bit 0-20 mA, 4-20 mA (max 300 ohm) 0-10 VDC, 0-5 VDC (min 10,000 ohm)	Optoisolated, 16 bit 0-20 mA, 4-20 mA (max 300 ohm) 0-10 VDC, 0-5 VDC (min 10,000 ohm)
Display	Eight-digit alphanumeric tow line LCD, 5 mm high	Backlit graphic LCD, transmissive 128 x 64 pixel resolution, 60 x 32 mm visible area
Keyboard	Control knob and DIP switches	Five-key tactile keypad Test, Zero, Tare, Print Menu, Escape, Left and Up, Navigator, Enter
Temperature & Humidity	Working temperature: -4° F to 140° F (-20° C to 60° C) Humidity: 85% non-condensing	Working temperature: -4° F to 140° F (-20° C to 60° C) Humidity: 85% non-condensing
Dimensions (W x H x D)	SCT converter (W x H x D): 3.54 in x 3.74 in x 2.36 in (90 mm x 95 mm x 60 mm) IP67 enclosure (W x H x D): 6.69 in x 5.51 in x 3.74 in (170 mm x 140 mm x 95 mm)	SCT converter (W x H x D): 5.82 in x 3.62 in x 2.36 in (148 mm x 92 mm x 60 mm)
Weight	1 lb (0.5 kg)	1 lb (0.5 kg)
Rating/Material	DIN rail mount: NEMA Type 1 Sealed enclosure: NEMA Type 4/IP67, plastic enclosure, clear cover, six PG9 cord grips	DIN rail mount: NEMA Type 1 Sealed enclosure: NEMA Type 4/IP67, plastic enclosure, clear cover, six PG9 cord grips
Warranty	One-year limited warranty	One-year limited warranty

Standard Features

- LCD display, 5 mm, eight digits
- Powers up to eight (350 ohm) load cells in parallel (with a 24-bit A/D converter)
- A/D converter 24-bit 4.8 kHz
- 16-bit analog output: 0-20 mA, 4-20 mA, 0-5 V, 0-10 V, ±5 V, and ±10 V
- Mounting on Omega/DIN rail for back panel or junction box
- IP67-rated enclosed versions
- Diagnostic message for load cell disconnect and over capacity errors

Standard Features

- LCD display, 60 x 32 mm
- Supports up to eight independent reading channels for load cells
- Displays weight, configuration, calibration and error conditions
- DIN rail mounting
- Theoretical calibration, real-weight calibration and error conditions
- Push button or preset tare
- Converts digital weight to analog output or optional DeviceNet™ , Profibus™ or EtherNet/IP™ protocols
- Supports ASCII or MODBUS RTU protocols
- Full scale analog cut put with zero setting and PLC correction of analog signal
- Bit swapping selection for little endian and endian format
- Three digital inputs, five digital outputs
- One serial port, RS-232 simplex and RS-485 connection
- CD manual

SCT-1000

Part Number/Price

Part #	Description	Est. Weight	Price
188483	SCT-1000 converter RS 232/485 to Ethernet TCP/IP and Modbus TCP	1 lb	$375.00

SCT-1100

Part Number/Price

Part #	Description	Est. Weight	Price
182588	Indicator, SCT-1100-AN four load cell input with Analog Output	1 lb	$385.00
197011	Indicator, SCT-1100-AN four load cell input with Analog Output in plastic enclosure	1 lb	$550.00

SCT-2200

Part Number/Price

Part #	Description	Est. Weight	Price
Transmitters			
182587 *	Indicator, SCT-2200 for scale input to be used with fieldbus module	1 lb	$270.00
182589	Indicator, SCT-2200-AN with Analog Output	1 lb	$385.00
Fieldbus			
182592	Fieldbus, SCT-2200,Profinet Module	1 lb	$470.00
182594	Fieldbus, SCT-2200, Wi-Fi Module	1 lb	$460.00
194343	Fieldbus, SCT-2200, Ethernet TCP/IP and WiFi	1 lb	$470.00
182593	Fieldbus, SCT-2200, Profibus Module	1 lb	$300.00
182591	Fieldbus, SCT-2200, EtherNet/IP Module	1 lb	$470.00
182596	Fieldbus, SCT-2200, DeviceNet Module	1 lb	$470.00
182598	Fieldbus, SCT-2200, EtherCAT Module	1 lb	$470.00
182597	Fieldbus, SCT-2200, CANopen Module	1 lb	$470.00
196694	Fieldbus, SCT-2200, Modbus TCP Module	1 lb	$470.00
182599	Cable with RJ45 plugs, 6 in length	1 lb	$10.00

How to Order the SCT-2200
Order SCT-2200 transmitter.
Order fieldbus module (HUB mode connects up to 16 transmitters to one fieldbus module).
Order cables: (Number of SCTs — 1) + (1 for Fieldbus).

SCT-3300

Part Number/Price

Part #	Description	Est. Weight	Price
Transmitters			
188725	Indicator, SCT-3300 four load cell input with Analog Output	1 lb	$290.00

Power Supply

Part Number/Price

Part #	Description	Est. Weight	Price
88792	12VDC 1.2A DIN rail mounted power supply	1 lb	$130.00
119244	24VDC 1.3A DIN rail mounted power supply	1 lb	$150.00

SCT-10

Part Number/Price

Part #	Description	Est. Weight	Price
129393	SCT-10 converter with Analog Output	1 lb	$400.00
129394	SCT-10 converter with Analog Output in enclosure	1 lb	$550.00
131129	Installation manual	1 lb	$25.00

SCT-20

Part Number/Price

Part #	Description	Est. Weight	Price
129396	SCT-20 converter with Analog Output	1 lb	$400.00
129397	SCT-20 converter with DeviceNet™	1 lb	$600.00
129558	SCT-20 converter with Profibus™ DP	1 lb	$600.00
129398	SCT-20 converter with EtherNet/IP™	1 lb	$750.00
132534	SCT-20 converter with Ethernet TCP/IP™	1 lb	$750.00
156903	SCT-20 converter with Modbus/TCP	1 lb	$750.00
131128	Installation manual	1 lb	$25.00
NTEP Approved			
162883	SCT-20 converter with Analog Output	1 lb	$475.00
162886	SCT-20 converter with EtherNet/IP single port	1 lb	$825.00
162887	SCT-20 converter with Ethernet TCP/IP	1 lb	$825.00

EtherNet/IP and Modbus output changed to Dual Port in 2019.
NTEP versions are still Single Port..

SCT-30

Part Number/Price

Part #	Description	Est. Weight	Price
156794	SCT-30 converter with Analog Output	1 lb	$325.00
156834	SCT-30 converter with Analog Output in enclosure	1 lb	$475.00
131129	Installation manual	1 lb	$25.00

SCT-40

Part Number/Price

Part #	Description	Est. Weight	Price
170470	SCT-40 with Analog Output	1 lb	$595.00
170471	SCT-40 with DeviceNet	1 lb	$850.00
170472	SCT-40 with Profibus	1 lb	$850.00
170473	SCT-40 with EtherNet/IP	1 lb	$850.00
170474	SCT-40 with Ethernet TCP/IP	1 lb	$795.00
170475	SCT-40 with Modbus TCP	1 lb	$850.00
170476	SCT-40 with Profinet I/O	1 lb	$850.00
131128	Installation manual	1 lb	$25.00

EtherNet/IP and Modbus output changed to Dual Port in 2019

INDICATORS / CONTROLLERS

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Questionnaires

ESPAÑOL

Visite **ricelake.com/spanish** para ver todos los materiales Rice Lake que están disponibles en español.

System Questionnaire

System/Application Description _____

Goals for Weighing System_____

Scale Type_____

      Scale/System Capacity _____ ☐ lb ☐ kg ☐ Ton ☐ Metric Ton ☐ Other

          # of Load Cells _____

      Required System Accuracy _____ % ☐ of Capacity ☐ of Applied Load

          Legal for Trade?　☐ Yes ☐ No

      Transmitter Power (at Load Cells)　☐ AC ☐ DC _____ Voltage ☐ Battery

      Receiver Power　　　　　　　☐ AC ☐ DC _____ Voltage ☐ Battery

      Check any Desired Output Options (If Applicable):

          mV output　　　☐ Yes ☐ No

          Analog output　☐ Yes ☐ No

          Relays　　　　 ☐ Yes ☐ No

          Do you require a serial cable?　Yes　☐ 9pin ☐ 25pin ☐ No

Remote Control Required?　☐ Yes ☐ No

Remote Display Required?　☐ Yes ☐ No

      If Remote Display is not Required:

          Are Zero, Tare, On/Off Capabilities Required?　☐ Yes ☐ No

      If Remote Display is Required:

          Are Zero, Tare, On/Off Capabilities Required from the Remote Display? ☐ Yes ☐ No

          Does the Remote Display need to be Hand Held or Mounted?　☐ Hand Held ☐ Mounted

          Is the Remote Display Wireless or Hard Wired?　☐ Wireless ☐ Hard Wired

Note for SendIt Applications:

Every SendIt needs to be calibrated using a laptop/pc with a serial port (or a USB adapter). The calibration of the SendIt pair must be done during the installation.

RF

Transmission Distance _____ ☐ ft   ☐ m

Line of Sight   ☐ Yes   ☐ No

Obstructions (list any)_____

Potential Sources of RF Interference _____

Other RF Systems Present   ☐ Yes _____ ☐ No

Indoor ☐   Outdoor ☐

Sketch of RF Field

This sketch will be used by our technicians to help find the optimum
antenna types and locations for this application.

- Include all transmitters and receivers that are part of this weighing system.
- Include any other transmitters or receivers operating at 2.4 GHz
- Include any RF barriers, such as concrete walls, large steel equipment, cages
- Include sources of interference, such as high-power electrical motors and generators
- Include dimensions, so we can understand the range and antenna gain requirements

Hook Questionnaire

Dimensions from crane's existing hook

Hook Saddle Profile
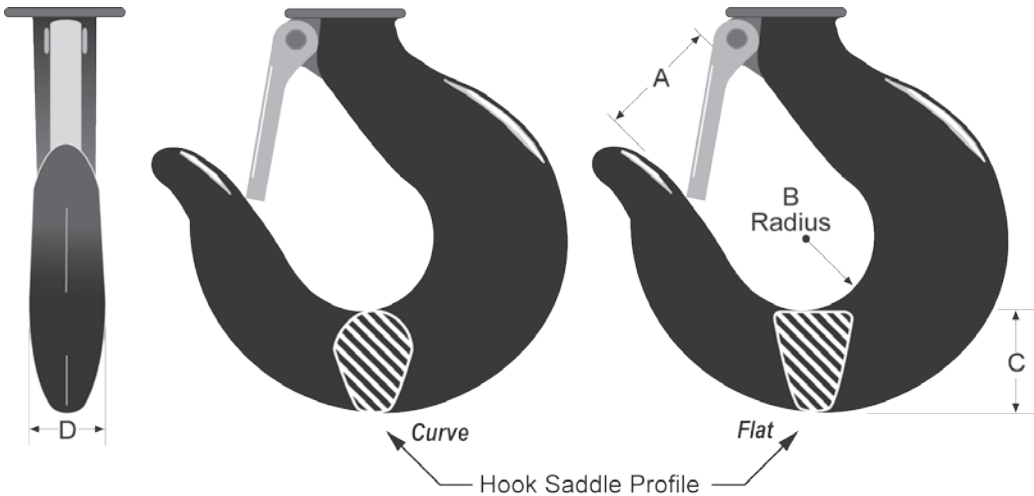
Required Dimensions

A= _____in/mm

B= _____in/mm

C= _____in/mm

D= _____in/mm

Profile: ❏Curve ❏Flat

Hook Capacity _____

Load Pin Critical Dimensions

Standard Load
Sensing Clevis Pin for
Wire Rope Sockets
Dead-Ends

LUG OR SHEAVE

Sheave/Pulley
Load Pins
Equalizer/Idler
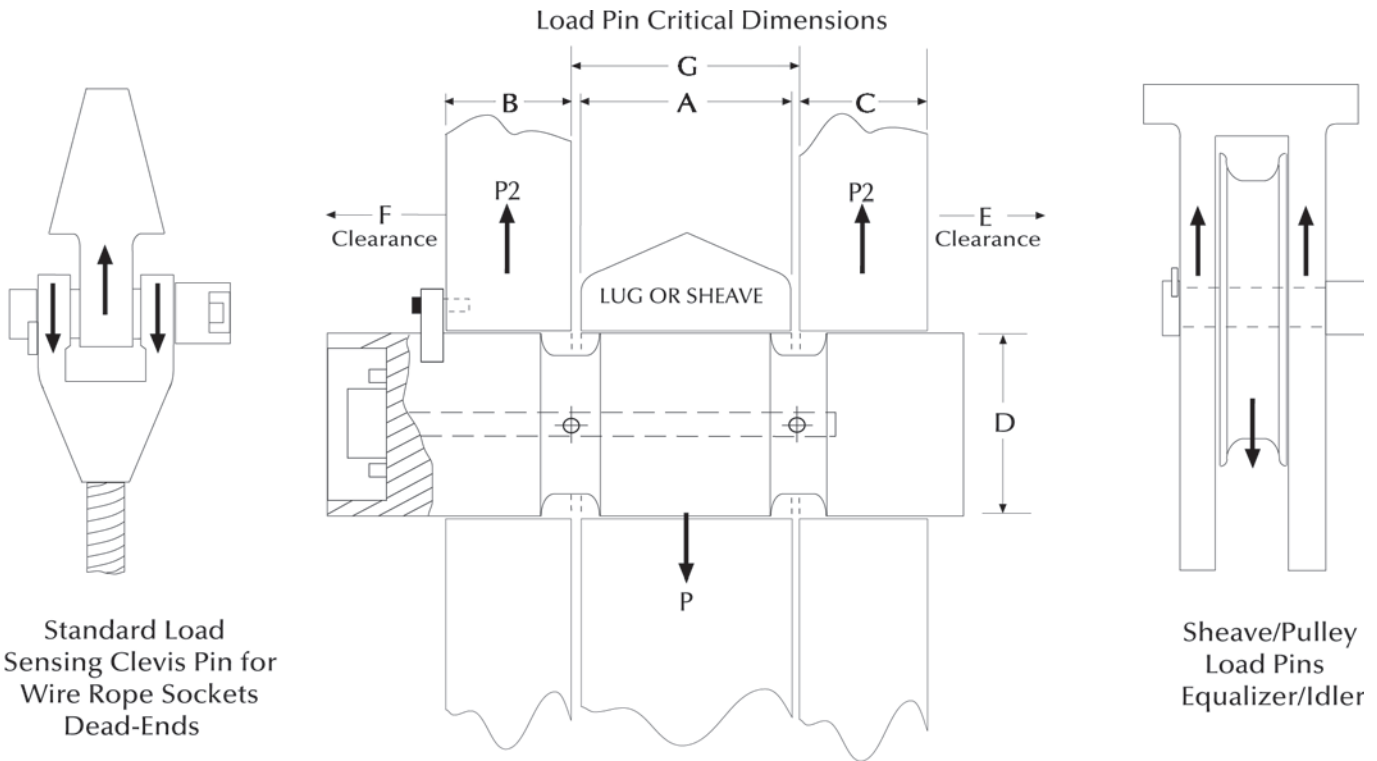
Load Pin Data

A=Width _____ Inch
B=Width _____ Inch
C=Width _____ Inch
D=Pin Diameter _____ Inch
E=Clearance _____ Inch
F=Clearance _____ Inch
G=Width _____ Inch
Lube Port   ❏No   ❏Yes _____ # of exits
Hoist Capacity _____ Tons
Parts of Wire Rope _____
Sensor Capacity _____ Tons
Factor of Safety ❏3:1 ❏5:1 ❏7:1 ❏10:1
Application _____
Accuracy Requirement _____
Temperature Requirement _____
Required Output _____
Material Testing Requirement _____
 Load Vector Orientation/Alignment ❏← ❏→ ❏↓ ❏↑
Name _____
Company_____
Phone_____
Note: Minimum clearance between
"A" and "G" = 0.0625 inch.

Cable Connections

End-Mounted
Cable
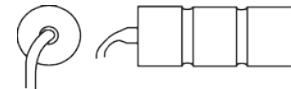
End-Mounted
Connector (standard)

Side-Mounted
Cable

Side-Mounted
Connector

Recessed
Connector

Sensor's Cable Length_____ Feet

Comments_____

_____

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Low Headroom Weighing Consideration

Concern: Customer wants MSI crane scale accuracy, but has vertical headroom concerns
Solution: Consider an in-block adapter

MSI In-Block Crane Scale Assembly

4

Attach an In-Block Adapter

3

Remove Crane Scale's Top Shackle Headroom

2

Remove Hoist Hook's Existing Headroom

1

Total Headroom Consideration

Hook Headroom

Shackle Headroom

Final Assembly
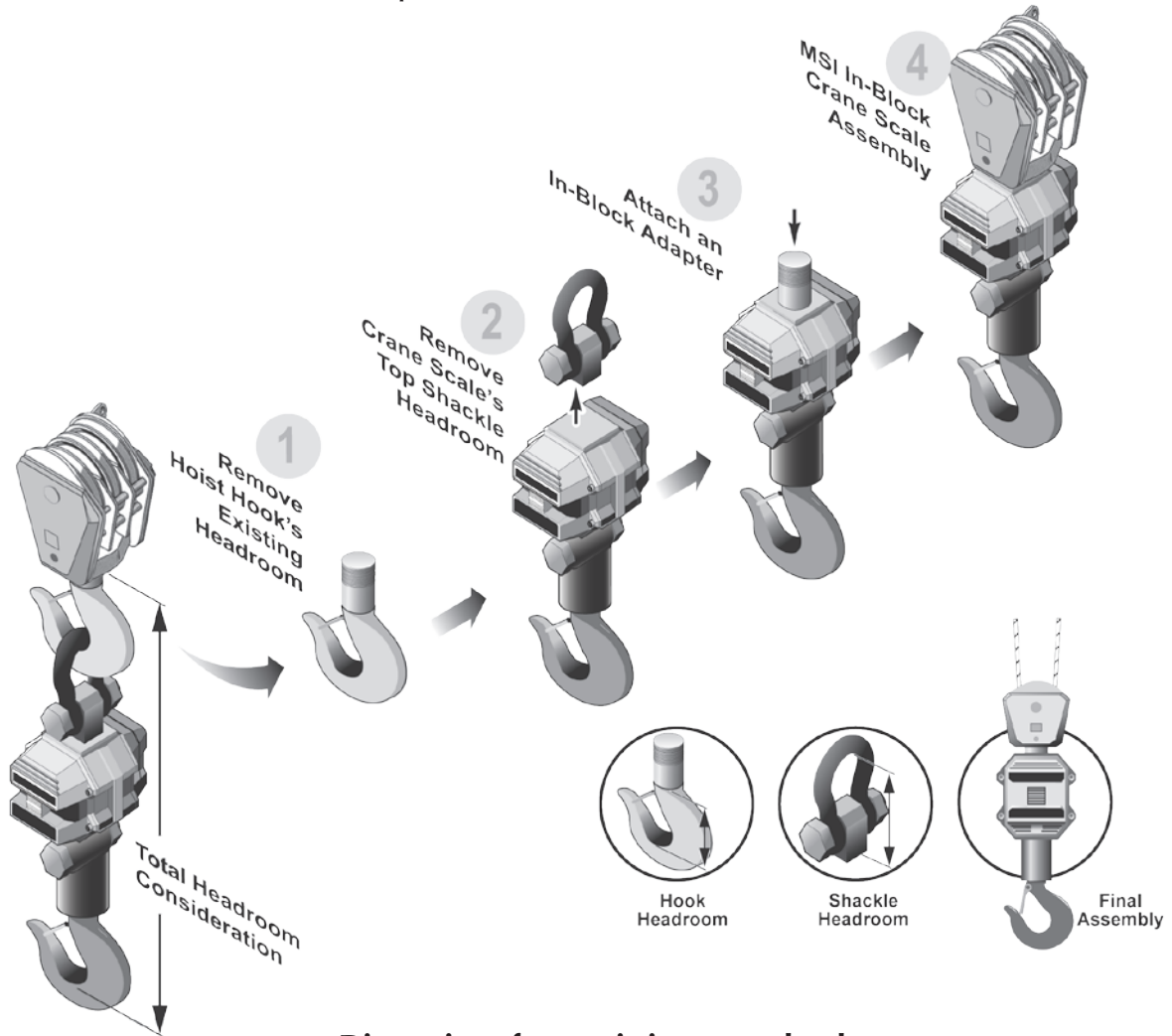
Dimensions from existing crane hook

Required Dimensions

A= _____ in/mm
B=_____ in/mm
C= _____ in/mm
D= _____ in/mm
E=_____ in/mm
F=_____ in/mm
G= _____ in/mm
H= _____UNC
Hook Capacity_____

Thread **(H)**   A
B
C
G
F
D
E
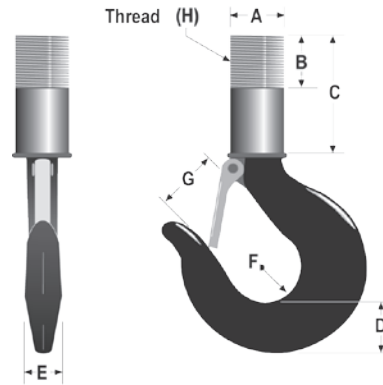
Weighing System Questionnaire

Company _____

Name _____ Date _____

Phone _____ Fax _____ Email _____

Project Name _____

System Objective _____

System Description _____

_____

APPLICATION PARAMETERS

Basic System Design: ❑ BTH*   ❑ Equalizer Sheave   ❑ Dead-End   ❑ C-Hook
   ❑ Spreader Bar   ❑ Coil Grab   ❑ Coil Lifter   ❑ Rotating Crane Hook/Grab

System Capacity: _____ ❑ lb   ❑ kg   ❑ tons   ❑ metric tons   ❑ Other _____

System Accuracy: _____ %   ❑ Applied Load   ❑ Rated Capacity

      Legal for Trade   ❑ Yes   ❑ No

Crane Type: ❑ Bridge   ❑ Mobile Fixed Boom   ❑ Mobile Ext. Boom Gantry
   ❑ Container   ❑ Lattice Boom   ❑ Jib   ❑ Other _____

Reeving: _____ Parts of Wire-Rope   _____ At Bottom Load Block   _____ At Load Sensor
   ❑ N/A

Power Supply: ❑ DC   ❑ AC   Voltage _____

LOAD SENSOR(S)

Number of Sensors: ❑ 1   ❑ 2   ❑ 3   ❑ 4   ❑ Other _____

Load Sensor Design: ❑ Tension Link   ❑ Clevis/Sheave Load Pin   ❑ Single End Shear
   ❑ Double Ended Shear   ❑ Compression

Load Sensor Capacity: _____ ❑ lb   ❑ kg   ❑ tons   ❑ metric tons   ❑ Other _____

Load Sensor Location: ❑ BTH*   ❑ Equalizer/Idler Sheave   ❑ Dead End
   ❑ Other_____

Environment: ❑ Indoor   ❑ Outdoor   ❑ Other _____

Other Requirements: _____

INSTRUMENTATION

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RICE LAKE

Dyna-Clamp Questionnaire

Industry Dyna-Clamp will be used in: _____

Is protective case required: ☐ YES   ☐ NO

Wire Rope Pre-Calibration:

1. Rope/Cable Diameter: _____ Inch / mm Strand Arrangement: _____

Rope/Cable Material _____

Minimum Breaking Load (MBL) if known: _____

Working Load Limit (WLL) if known: _____

2. Rope/Cable Diameter: _____ Inch / mm Strand Arrangement: _____

Rope/Cable Material _____

Minimum Breaking Load (MBL) if known: _____

Working Load Limit (WLL) if known: _____

3. Rope/Cable Diameter: _____ Inch / mm Strand Arrangement: _____

Rope/Cable Material _____

Minimum Breaking Load (MBL) if known: _____

Working Load Limit (WLL) if known: _____

4. Rope/Cable Diameter: _____ Inch / mm Strand Arrangement: _____

Rope/Cable Material _____

Minimum Breaking Load (MBL) if known: _____

Working Load Limit (WLL) if known: _____

5. Rope/Cable Diameter: _____ Inch / mm Strand Arrangement: _____

Rope/Cable Material _____

Minimum Breaking Load (MBL) if known: _____

Working Load Limit (WLL) if known: _____

6. Rope/Cable Diameter: _____ Inch / mm Strand Arrangement: _____

Rope/Cable Material _____

Minimum Breaking Load (MBL) if known: _____

Working Load Limit (WLL) if known: _____

7. Rope/Cable Diameter: _____ Inch / mm Strand Arrangement: _____

Rope/Cable Material _____

Minimum Breaking Load (MBL) if known: _____

Working Load Limit (WLL) if known: _____

8. Rope/Cable Diameter: _____ Inch / mm Strand Arrangement: _____

Rope/Cable Material _____

Minimum Breaking Load (MBL) if known: _____

Working Load Limit (WLL) if known: _____

If working load limit is not known we will calculate it as a maximum of 20% of the MBL.

The Overhead Weighing Solutions Buyer's Guide

Information to help you choose a system for your overhead weighing needs

Contact Information

U.S. Sales/Technical Support
Phone 206-433-0199
Toll Free 800-874-4320

Canada/Mexico Sales/Technical Support
Phone 800-321-6703

Fax 206-244-8470

Email prodinfo@ricelake.com

Website www.ricelake.com/msi

Customer Assistance and Service
Department Hours

Weekdays 6:30 AM to 6:30 PM (CST)
Saturday 8:00 AM to 12:00 PM (CST)

Customer assistance available
in English, Spanish
and French.

Table of Contents

Introduction

Rice Lake Weighing Systems' Measurement Systems International (MSI) brand of overhead weighing systems offers a comprehensive selection of quality weighing devices from tension dynamometers to crane scales.

MSI's tension dynamometer and selection of crane scales make durable and dependable solutions for a wide range of capacities and applications. Whether you need custom overload protection, a simple load monitoring device or a Legal for Trade system, MSI has a product to fit your unique requirements. Master challenging and high-temperature environments using proven load-sensing systems designed with a minimum of 5:1 Ultimate Safety Factor. From fishing and marine scale applications to heavy capacity coil handling, MSI overhead weighing equipment has a place in virtually every environment.

Overhead Weighing Systems Complement Every Industry

- Aviation/Helicopter Load Monitoring
- Port and Freight Terminals
- Construction
- Concrete Production
- Mining Facilities

- Steel Mills and Foundries
- Waste Management
- Chemical Processing
- Fishing Industry
- Energy Production
- Material Handling

MSI-4260M

*MSI-3460
Challenger 3*

Crane Scales

Crane scales ensure safety and deliver accurate load measurements in many applications. When used properly, crane scales can help prevent unsafe conditions by providing real-time measurement of the operational load and immediate feedback to operators and safety systems.

MSI-3460 Challenger 3

The MSI-3460 offers long-range viewing with a 1.5-inch, ultra-bright LED digital display. The MSI-3460 is suitable for light- to medium-duty applications up to 15,000 pounds.

MSI-4260 Port-A-Weigh

The MSI-4260 is built for heavy-duty dynamic weighing, ideal in bridge crane, foundry and in-process material handling applications.

MSI-4260 IS Intrinsically Safe Port-A-Weigh

The MSI-4260 IS is intrinsically safe, featuring a 5:1 safety factor and exceeding OSHA, ANSI and ASME safety requirements.

MSI-4260M

The MSI-4260M is the most robust scale on the market for marine and industrial weighing, able to capture weight with ± 0.1% accuracy and a resolution between 3,000 and 5,000 divisions.

*MSI-9300
Port-A-Weigh Plus
CellScale RF*

*MSI-9300HT Hi-Torque
Port-A-Weigh Plus
CellScale RF*

*MSI-6260CS
Trans-Weigh
CellScale RF*

MSI-4300 Port-A-Weigh Plus

The MSI-4300 is ideal for medium- to heavy-capacity industrial applications as well as fishing and marine scale applications requiring a large LCD display.

MSI-6260CS Trans-Weigh CellScale™ RF

The MSI-6260CS is ideal for medium- to heavy-capacity and duty-cycle applications not requiring an integral display.

MSI-9300 Port-A-Weigh Plus CellScale RF

The MSI-9300 uses advanced RF communication technology for complex medium- to heavy-capacity and duty-cycle applications.

MSI-9300HT Hi-Torque Port-A-Weigh Plus CellScale RF

The MSI-9300HT is designed with a high torque load train for fixed hook applications. Available in capacities up to 60 tons.

Tension Dynamometers

Tension dynamometers, or simply dynamometers, can be used to measure either vertical or horizontal tension. Rugged but lightweight, dynamometers are ideal for measuring tension in rigging, load tests, crane and elevator certification, and other straight-line lifting applications.

MSI-7300 Dyna-Link 2

The MSI-7300 is the industry's most advanced digital tension dynamometer. Constructed of high-grade, aircraft-quality aluminum with an anodized finish and gasket sealing, the Dyna-Link 2 is built to address caught-load or slack-line issues that may cause unsafe conditions.

MSI Dyna-Clamp Tension Meter

The MSI Dyna-Clamp clamp-on tension meter is safe and easy to use, with a site window ensuring accurate placement of the wire rope being tested by the operator. Unlike other clamp-on tension meters, the Dyna-Clamp is designed with an easy-turn power screw that doesn't require as much manual force to engage the wire rope the operator is testing.

MSI Dyna-Clamp Tension Meter

Integrated Solutions

MSI integrated solutions are versatile enough to be applied no matter the headroom, capacity or environment. Load pin sensors, tension links and clamp-on load cells can bring overhead weighing solutions to the next level.

Load Pin

MSI Clevis Load Pin Sensors

Load pin sensors are custom-designed and constructed of strictly industrial-grade stainless steel, providing extreme durability and a minimum 5:1 factor of safety to any integrated overhead weighing solution.
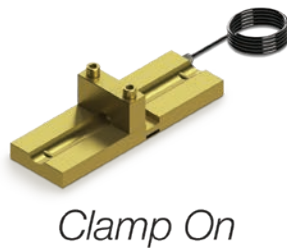
Clamp On

MSI Clamp-On Load Cell

Clamp-on load cells measure wire rope tension to prevent overloads on overhead cranes and hoists with minimal modification to existing infrastructure.
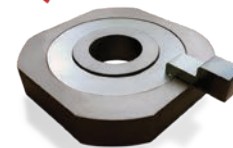
Shear Web

MSI Shear Web Load Cell

Shear web load cells compensate for hook rotation and eliminate headroom loss without sacrificing accuracy.

Below the Hook Crane Scale

Low Headroom Option

The Low headroom option integrates a below the hook crane scale directly into the bottom block by replacing the existing hook.

MSI Tension Link

The tension link is suited for integration with cranes, offering force measurement for lifted items by measuring at the dead-end becket.

Indicators and Remote Displays

Indicators communicate weight data and increase process control. Remote displays allow operators to use weighing systems from a distance, promoting safety and efficiency.

MSI-8000 RF Remote Display

MSI-8000 RF Remote Display

The MSI-8000 is a full-featured handheld remote display enabling users to operate weighing systems from a distance—and out of harm's way.

MSI-8000HD Indicator/RF Remote Display

The MSI-8000HD's full waterproof construction resists harm from the elements, making it an especially resilient indicator.

MSI-8004HD Indicator/RF LED Remote Display

With the option to view the display in either red or green LEDs, the MSI-8004HD provides longer viewing distances for more diverse environments and applications.

MSI-9750A CellScale RF Portable Indicator

The MSI-9750A functions as a simple, easy-to-use, full-featured portable RF terminal when networked with other CellScale family products.

MSI-9750A CellScale RF Portable Indicator

Indicators and Remote Displays

SCT-2200 Advanced Series Signal Conditioning Weight Transmitter

1280 Enterprise™ Series Indicator

The 1280 Enterprise Series with color touchscreen, web server view and multiple protocol types delivers uncompromising speed in any overhead weighing environment.

SCT-2200 Advanced Series Signal Conditioning Weight Transmitter

For PLC systems that require weight data from a scale, Rice Lake's compact SCT transmitters deliver equivalent signal-conditioning function without the cost or bulk of a full-sized weight indicator or controller.

MSI-9850 CellScale RF Digital Indicator

MSI-9850 CellScale RF Digital Indicator

The MSI-9850 serves as a wireless remote controller and weight indicator, providing remote access to multiple scales and sensors in a configured CellScale network.

Wireless Network Solutions

From the initial weighment on the scale to the final numeric value on the indicator, efficient communication is key to the success of the entire overhead weighing process. Wireless transmitters and receivers easily communicate data between various electronics in your scale system.

TranSend™ Wireless Load Cell Interface

TranSend is a wireless load cell interface that transforms load cell signal and transmits the data wirelessly to a receiving unit.

MSI-9000 CellScale Wireless Weighing Solution

The MSI-9000 is an innovative, technologically advanced product for wireless weighing in industrial plant applications.

MSI-9020 CellModem

The MSI-9020 provides a wireless interface from a CellScale product to any serial device with support for computers, remote displays, printers, PLCs and virtually any serial connected device.

MSI-9000 CellScale Wireless Weighing Solution

TranSend Wireless Load Cell Interface

Integrated Shear Web Load Cell

TranSend can transmit to one of the following options
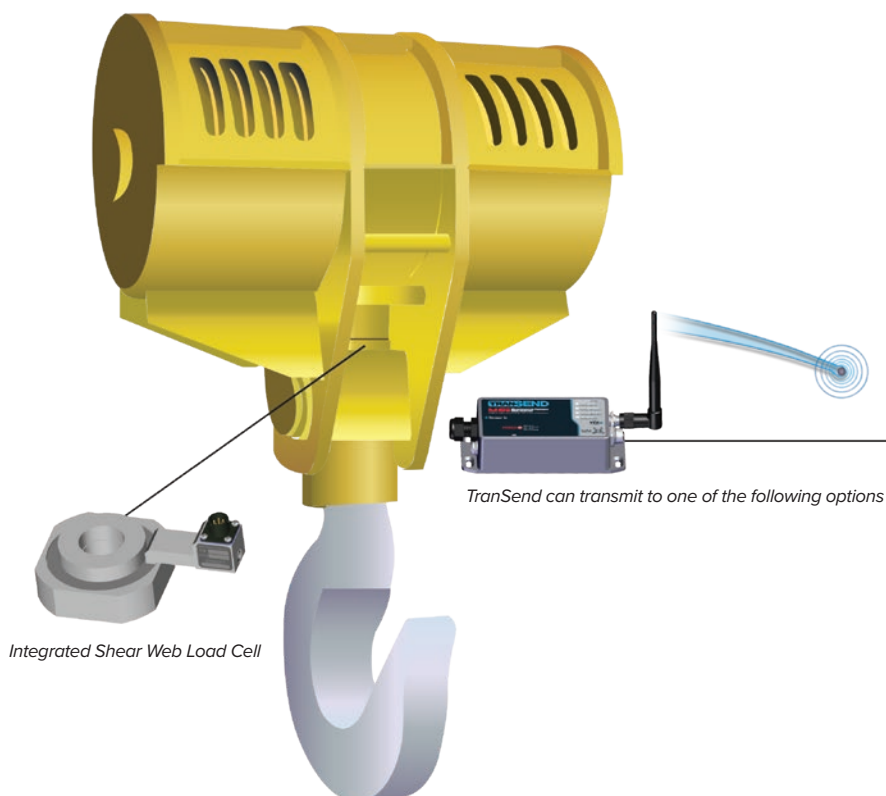
MSI-8000HD Remote

MSI-8004HD Remote

MSI-8000 Handheld Remote

LaserLight2 Remote Display

Before You Buy

Crane scales measure real-time operational loads and provide immediate feedback to operators to prevent unsafe conditions. Determine the best crane scale for your application by exploring your overhead weighing goals and analyzing aspects of your environment.

Overhead Weighing Goals

- Load monitoring prevents crane accidents, ensures compliance, maintains employee safety and protects equipment. Scales should meet OSHA, ANSI, ASME and other safety design standards (5:1 ultimate safety factor). Accuracy is 1-3% full scale.
- Process control helps meet the requirements of in-process crane scales, which include accurate weighments, real-time information and integration with manufacturing data acquisition systems. Accuracy is 0.1% full scale.
- Data integration systems increase informational exactness and control, stream data from the weighing system to a customer's database program and help reduce human error.

RF and Signal Processing Solutions

Add traceability and transparency to your processes. With several methods of radio frequency (RF) technology, wireless communication products can be easily integrated with almost any industry or environment.

Whether used in shipping, material handling, foundries, shipyards, construction or freight applications, Rice Lake's MSI brand of trusted overhead weighing solutions assists in creating safe and efficient operations.

Crane Weighing Solutions

Common overhead weighing equipment includes below-the-hook crane scales, integrated scales, integrated sensors, and RF and signal processors. From bridge cranes to gantry and tower cranes, rugged, reliable overhead weighing solutions are available for many different applications.

Below are common types of cranes and their ideal weighing systems:

Monorail Hoist

The most commonly used hoist is the monorail hoist, which uses a chain hoist or block with wire rope or cable and has a one- to 10-ton capacity. Due to their high capacity and versatility, monorail hoists are often used in industrial facilities.
Recommended scale: MSI-3460

Jib Crane

A jib crane is designed with a horizontal member supporting a moveable hoist and is commonly used in workstation applications and machine shops. It is also useful in production and shipping where there may be a need to weigh smaller machine parts during or after production to check weight for shipment.
Recommended scale: MSI-3460

Bridge Crane

In a one- to 100-ton bridge crane, the trolley moves laterally while the bridge moves longitudinally. In turn, this offers a wide range of motion, integrates easily into existing applications and boosts efficiency.
Recommended scales: MSI-4260, MSI-4300, MSI-9300, MSI-6260CS

Rail Mounted or Rubber Tire Gantry

The rail mounted or rubber tire gantry moves similarly to a bridge crane and is frequently found in factory applications such as steel yards, paper mills and other heavy industrial facilities. They are common on rails or tires, as well as in heavy capacity weighing industries where capacities can range from one to 200 tons.
Recommended scale: MSI-4260, MSI-6260, MSI-9300

Semi Gantry

Similar to a gantry crane, a semi gantry has one end of the bridge rigidly supported on one or more legs that run on a fixed rail or runway. The other end of the bridge is supported by a truck running on an elevated rail or runway.
Recommended scale: MSI-3460, MSI-4260

Integrated Weighing Solutions

Most bridge, monorail, jib, gantry and straddle crane safety systems employ an integrated load sensing system. An integrated load sensor is installed and integrated where load is consistently applied relative to the actual load the crane is handling, generally with sheave pin, load link and compression designs.

We recommend the MSI-3460 for jib cranes.
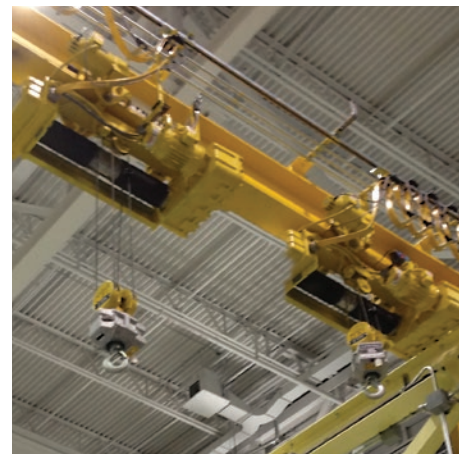
Bridge cranes pair well with a variety of MSI scales, though environment can impact the choice.

Multiple MSI scales can be used with rail mounted and rubber tire gantry cranes.

Create an Integrated System

01

Determine what type of sensor you need.

- Load pins offer accuracy of 1-3% of their rated capacity.
- Load links and shear web load cells have an accuracy of 0.5% of their rated capacity.
- Clamp-on load cells have an accuracy of 3-5% of the hoist capacity and will accommodate a wire rope up to 3/4" in diameter.
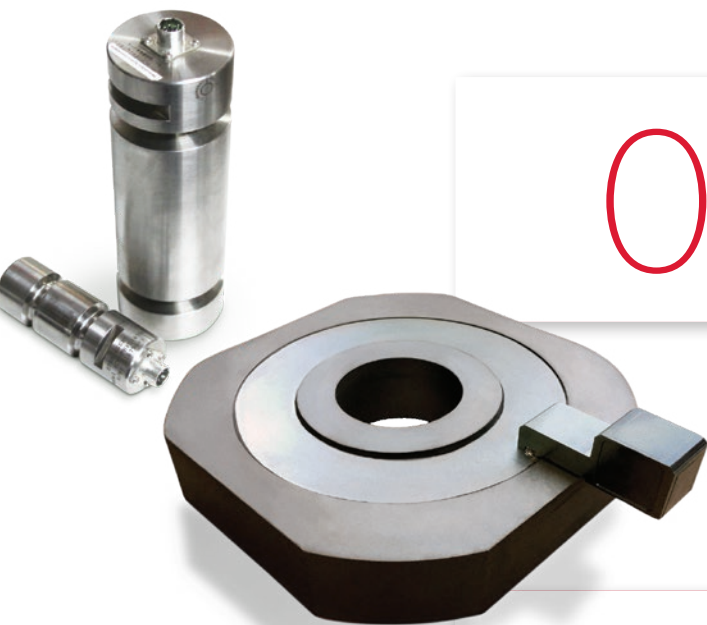- Custom sensors are also available.

02

Choose a cable length.

- Options include 5, 10, 15, 20, 25 and 30 feet.
- Rice Lake recommends using a bulkhead connector with mating cable.
- Custom length cables are available.

03

Decide whether you want an RF transmitter or signal conditioner.

- MSI-7000/7001 TranSend (100-300 ft)
- MSI-9000 CellScale (500-1,000 ft)
- SCT-2200 (N/A)

04

Choose a remote display or controller.

- Handheld: MSI-8000 or MSI-9750A
- Desktop: MSI-9850
- Desktop LCD: MSI-8000HD
- Desktop LED: MSI-8004HD
- Tablet
- Desktop Programmable:
  1280 Enterprise Series*
  custom user programs are available.

05

Your RF transmitter or signal conditioner will have the following relays:

- 2, 3, 4, 8 (MSI-7000 TranSend)
- 2, 4, 8 (MSI-8000HD, MSI-8004HD)
- 3 (MSI-9000 CellScale)
- Up to 3 (MSI-9850)
- 2 (SCT-2200)
- Inquire about other available I/O and fieldbus options.

06

Select a remote display.

- Hardwired or wireless
- 4- or 6-inch LaserLight2®

Tips for Installation

Get years of successful operation from your MSI overhead weighing systems with these tips and best practices for installation and calibration.

Required Equipment and Documentation

The following items are necessary for successful installation, configuration, simulated calibration, pre-calibration or final calibration of MSI scales and systems:

- Laptop with MSI Configuration Program downloaded
- Product-specific serial cables
- Tripplite USB-to-serial converter cable
- Manuals (digital or hardcopy)

Load cell simulators and system schematics, available by request at the time of order, are technically optional equipment and documents. However, simulators and system schematics can help troubleshoot problems that may occur during installation.

Additionally, test weights for calibration and weight verification are required for integrated systems, but are recommended for calibrating other MSI products as well.

Best Practices for a Successful and Timely Installation

Before beginning installation, power on all of electronics to ensure basic system functionality. If there is an issue with any electronics in the system, contact customer support for help resolving the issue. To become more familiar with the MSI scale or system, review all manuals before beginning setup or calibration procedures.

In addition, perform a practice calibration on the system before attempting a full calibration on-site. If your system was factory calibrated, test the current calibration of the system before installation by performing a simulated calibration. A serial cable should be stored at the weighing system site after installation to ease any troubleshooting during future maintenance.

Troubleshooting Tips for Problems During Installation

- If there are installation problems, refer to the optional system schematic for a wiring guide. Check connection points and ensure components are properly grounded.
- If the system has communication errors, review antenna locations to ensure they are within the recommended distance and have no solid objects blocking the transmission. Locate crane remotes, Wi-Fi or Bluetooth® modems and competing RF weighing systems to determine whether these sources may be causing an interference.
- Phone support or an RF site survey may be necessary for persistent issues. To assist with phone support, record all the networks, IDs, serial numbers and print strings associated with the system.
- If problems continue during installation, request on-site support from an MSI product specialist.

Rice Lake offers a comprehensive line of MSI overhead weighing systems, including crane scales, tension dynamometers and integrated solutions. Rental supplies for RF site surveys are also available to assist with product installation and troubleshooting. Live customer support can be reached 24/7 by phone and industry experts are always ready to help with any product questions.

Calibration and Maintenance

Calibration

Overhead weighing systems should undergo scheduled calibration tests to make sure weight readouts are accurate. This is particularly important for applications where Legal for Trade certification is necessary.

A certified scale dealer will calibrate overhead weighing equipment after installation. If your overhead weighing system is going to provide weight readouts for commerce, the scale will need to have a Legal for Trade approval to ensure the weight is within a certain degree of accuracy. Discuss with your scale supplier if you will need a crane scale that meets Legal for Trade approval, and which approval agencies, such as the National Type Evaluation Program (NTEP), Measurement Canada, or state and local approval agencies, need to provide certification for commerce in your area. The scale's calibration interval is determined by the frequency of use, individual application requirements, and federal, state and local guidelines. Each scale component should be tested and detailed test reports should be provided to the customer and government authorities. After calibration, detailed reports must be provided to weights and measures authorities.

Protective Features and Scheduled Maintenance

Many manufacturers design scales with protective features to reduce the chances of system failure and minimize the amount of maintenance needed. For example, a scale may be built with self-contained protective features to prevent it from being loaded above its rated capacity. Still, inspections of your overhead weighing equipment should be scheduled regularly to make sure your system is running properly.
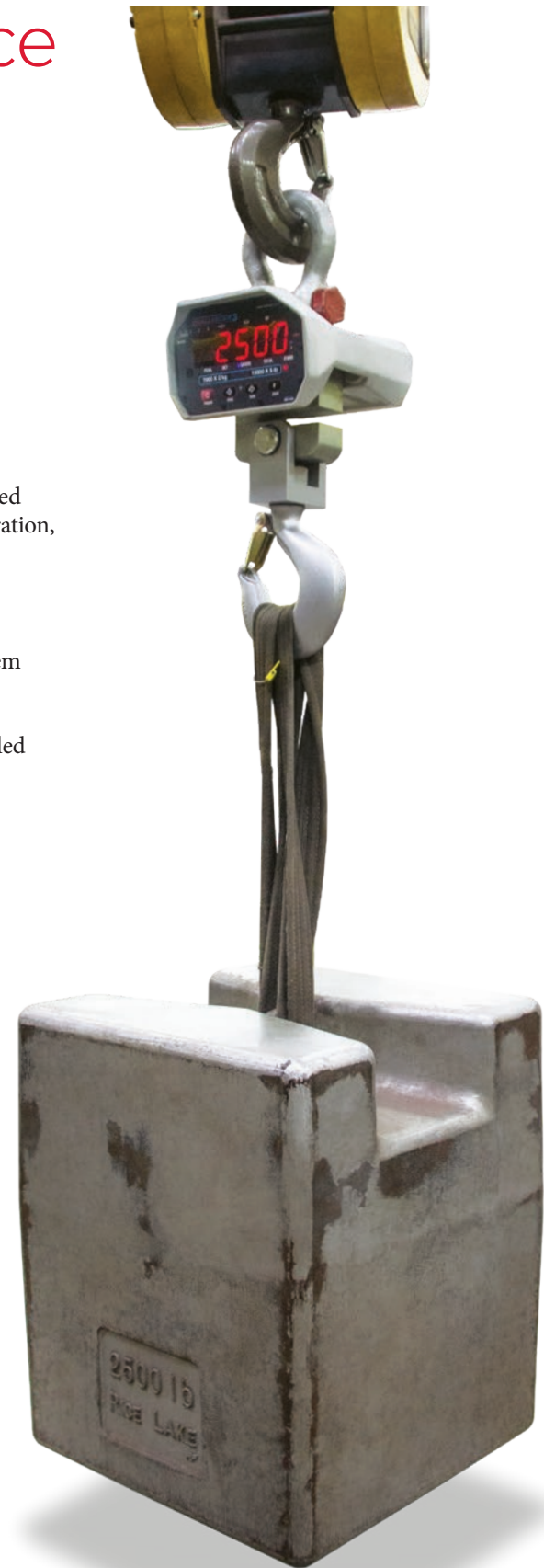
Glossary

Accuracy

The ability of a scale to measure a known weight value correctly.

Analog to Digital

Conversion of continuously varying (analog) voltage levels to discrete binary-numbered (digital) values (e.g., a load cell output can be fed through an A/D converter to produce a continuous stream of digitized information and sent to a digital indicator).

Calibration

The comparison of load cell outputs against standard test loads.

Capacity

The amount of weight the scale is capable of weighing accurately.

Clamp-On Load Cell

Load cells used for measuring wire rope tension and preventing and detecting overload for overhead cranes and hoists.

Crane Scale

A suspended scale that is used for light- to heavy-capacity overhead weighing.

Handbook H-44

A comprehensive set of requirements for weighing and measuring devices that are used in commerce and law enforcement activities; not a federal law, but developed and updated annually by the National Conference on Weights and Measures. Its complete title is "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices."

Indicator/Controller

Indicators function as control devices for overhead weighing systems. They collect the digital weight readout from the scale's load cells and also provide process reports and data.

Integrated Solution

A permanently-installed shear web load cell, clevis load pin or clamp-on load cell used to provide constant load monitoring and prevent overloads.

International Organization of Legal Metrology (OIML)

Treaty organization that recommends technical requirements for weighing and measuring equipment prior to the sale or distribution of a model or type within the state, nation, etc.

Legal for Trade

An industry recognized term to distinguish approval from the appropriate weights and measures regulating authority to use a scale for weight-based transactions and commerce.

Linearity

A factor that makes up a scale's accuracy. Linearity is the scale's ability to measure as close to the target weight as possible.

Load Cell

A device that produces an output signal proportional to the applied weight or force.

Load Pin Sensor

A unique, industrial-grade integrated solution that offers safety, strength and corrosion resistance in overhead weighing applications.

Maximum Allowable Variation

A deficiency in the weight, measure, or count of an individual package beyond which the deficiency is considered to be an unreasonable error.

Glossary Continued

National Institute of Standards and Technology (NIST)

An agency within the United States Department of Commerce. NIST regulates measurement in the United States to ensure accurate weight-based commerce. NIST's specifications and requirements for fair and accurate weighing systems are documented in Handbook 44 (H-44).

National Type Evaluation Program (NTEP)

A program of cooperation between the National Conference on Weights and Measures, NIST, state weights and measures officials and the private sector for determining conformance of weighing equipment with the provisions of H-44.

Output

The signal (voltage, current, pressure, etc.) produced by a load cell. Where the output is directly proportional to excitation, the signal must be expressed in terms such as volts per volt, millivolts per volt, or volts per ampere, etc., of excitation.

Remote Display

An instrumentation device for displaying weight data separately from an indicator/controller.

Repeatability

A factor that makes up a scale's accuracy. Repeatability is the scale's ability to measure and display the same weight each time it is tested. Repeatability is measured in standard deviation.

Shear Web Load Cell

An integrated, low-profile load cell that compensates for hook rotation and eliminates headroom loss.

Tare

The weight of an empty container or vehicle, or the allowance or deduction from gross weight made on account thereof.

Tension Link

An integrated solution for cranes designed to provide force measurement for lifted items.

(Tension Link) Dynamometer

An instrument used for measuring vertical and horizontal tension in overhead weighing applications such as rigging, load tests or crane and elevator certification.

Tolerance

A value fixing the limit of allowed departure from the labeled contents, usually presented as a plus (+) and minus (-) value.

Twist Lock Sensor

A durable, accurate SOLAS solution equipped with an internal strain gauge for measuring vertical tension while a crane is under load.
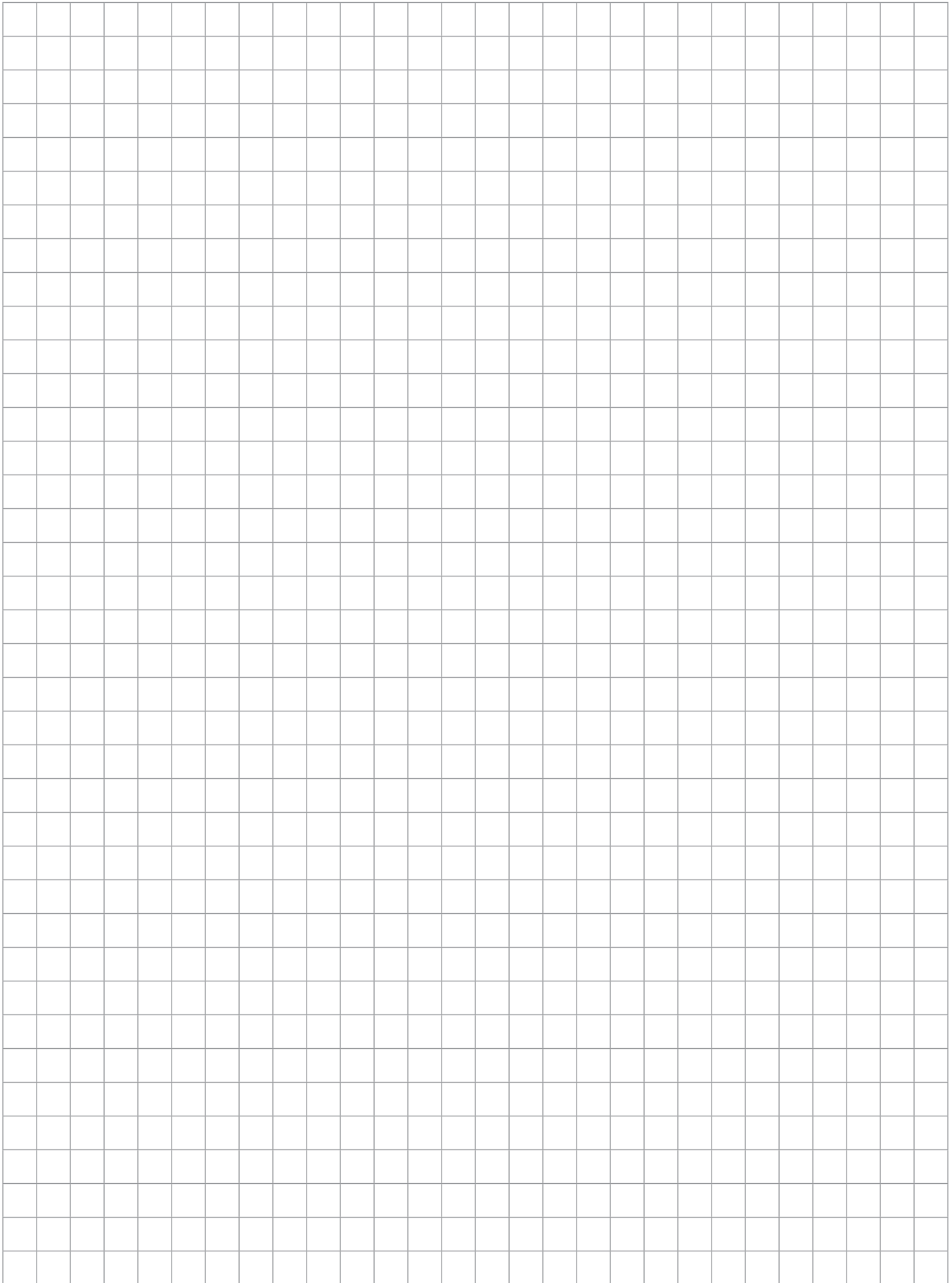
Units

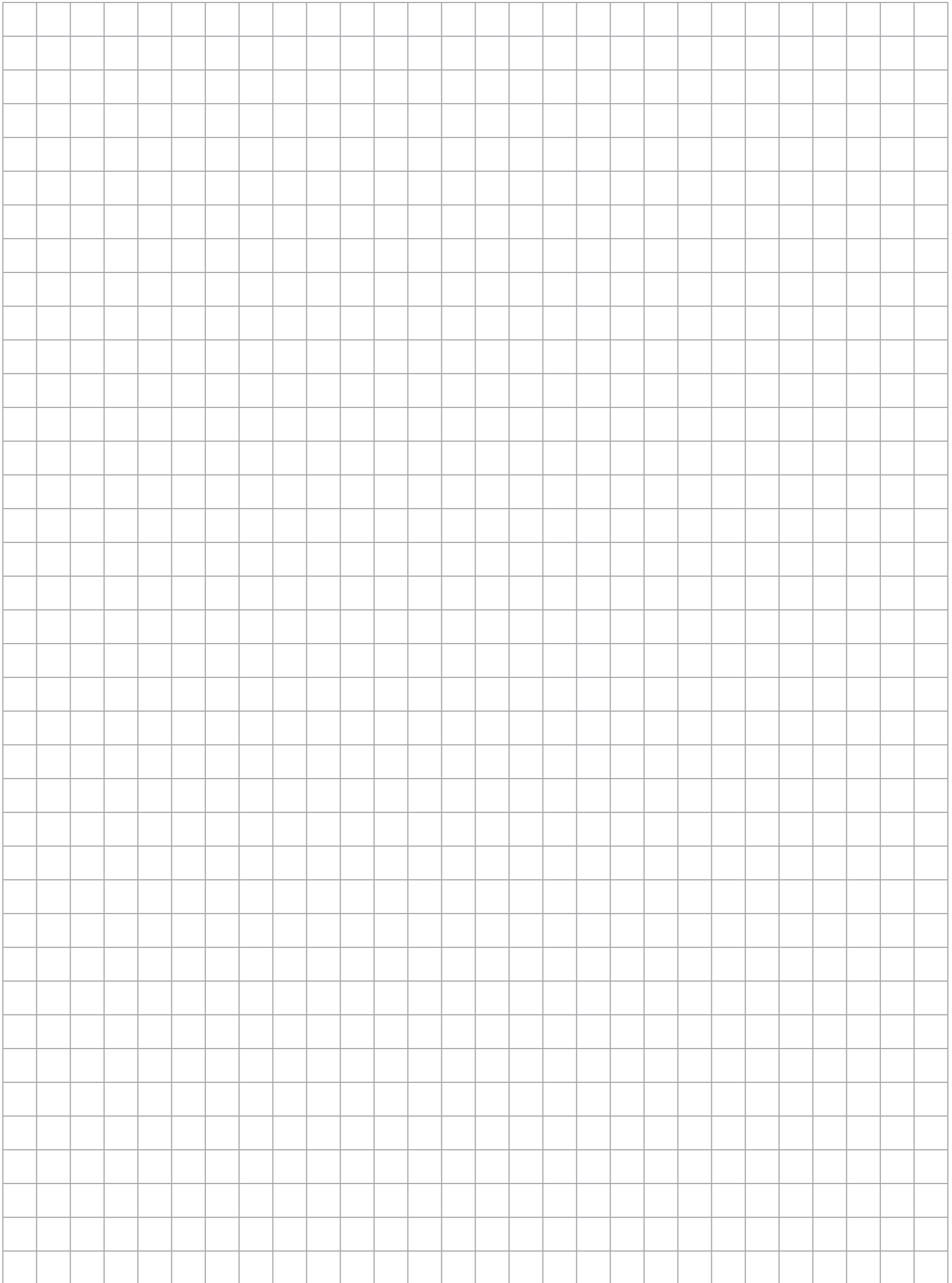The unit of measure that is to be represented: lb, kg, kN, etc.

Wireless Network Solutions

Used to communicate data between scale electronics.

SUPPORT
24/7 - 365 DAYS

Extended Business Hours
Are Our Standard

Rice Lake customer support is available via phone, email or web chat during our standard business hours:

Monday through Friday from 6:30a.m. to 6:30p.m., and
Saturday from 8:00a.m. to 12:00p.m. Central Time.

800-472-6703 **I** prodinfo@ricelake.com **I** www.ricelake.com

When you need support, you can rely on Rice Lake.

We look forward to answering your call.

RICE LAKE®
WEIGHING SYSTEMS

EMERGENCY CONTACT INFORMATION

Your service doesn't stop when the office is closed and neither does ours. Simply call **800-472-6703** and press 1 to reach on-call personnel outside of our normal business hours.

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Fernley, Nevada
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Over 40,000 weighing products and 3,000,000 parts distributed worldwide.

An ISO 9001 registered company

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Direct: 715-234-9171   Fax: 715-234-6967

EXTENDED BUSINESS HOURS
Monday through Friday from 6:30 a.m. to 6:30 p.m.
Saturday from 8:00 a.m. to 12:00 p.m. Central Time

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