

TAMTRON LOAD CELLS, DISPLAYS AND OVERLOAD INDICATORS

Tamtron equipment are a profitable investment for years to come

Tamtron **OPU (Overload Protection Unit)** is a result of long experience and years of product development. It meets the machine, EMC- and LV-directives and has been developed using the latest solutions of modern measuring technology.



Tamtron OPU is an electronic overload indicator for cranes. It has been designed to prevent overload directed to crane, bridge, lifting equipment, chains, wheel elevators and bars. OPU prevents damage in a hoist machine by stopping the lifting if the crane is overloaded, the load gets caught or the lifting rope is too loose. OPU is also used in the stability control of moving and transport machinery avoiding falling of the machine caused by overload. Typical applications for OPU are cranes, elevators, hoisting devices, forklift trucks, automatic guided vehicles and reach stackers.



Tamtron[®]

External displays, printers and data transfer

Versatile accessories for complete OPU monitoring system

OPU overload indicators can be equipped with various displays. The displays have remote tare possibility, on/off, zero, tare and gross/net keys (OSD 150 functions with remote control). The displays are equipped with infrared receiver unit which enables operation of remote control. The weighing result with time and date can be transferred through cable or with radio to PC or printer. Weight display is available with different units of weight and force.

External displays



OSD 150 Reading distance 80 m



OSD 50 Reading distance 50 m



OSD 25 Reading distance 10 m

Printers and data transfer



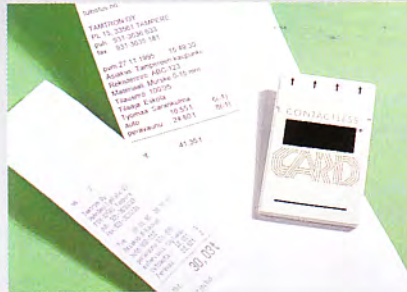
Thermo tape printer



Form printer



PC connection



Memory card



GSM

Advanced weighing instrument for demanding solutions.



AWI

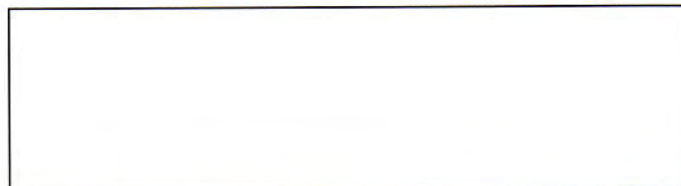
Quaranteed testing

Tamtron Oy is one of the leading manufacturers of overload indicators and weighing equipment. In addition to overload indicators and load cells Tamtron's main products are accurate and reliable crane, log crane, pallet truck, forklift truck, wheel loader and reach stacker scales. Through continuous product development and high quality Tamtron has now export to over 30 countries. Every Tamtron scale is subjected to wide range of tests before delivery and the calibration is carried out with verified weights. The delivery includes a detailed test certificate and also an illustrative user manual. Tamtron and its distributors all over the world offer effective maintenance services for the delivered equipment.



Tamtron®

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Tamtron Oy has developed and manufactured overload indicators and weighing equipment since 1972. Tamtron Oy is a parent company of Pivotex Oy.

OPU overload indicator

For safe and controlled weighing and lifting

MODEL OPU-10

- Three adjustable alarm limits
- For load from one load cell or for sum load of two load cells

MODEL OPU-20

- Three adjustable alarm limits
- Individual control of two load cells
- Sum control of two load cells

Supply voltage alternatives:

- A = 230 VAC
- B = 115 VAC
- C = 48 VAC
- D = 42 VAC
- E = 24 VDC
- F = 12 VDC

Display alternatives:

- OSD 150 mm external display
- OSD 50 mm external display
- OSD 25 mm external display

Protection class: IP 65

Printers:

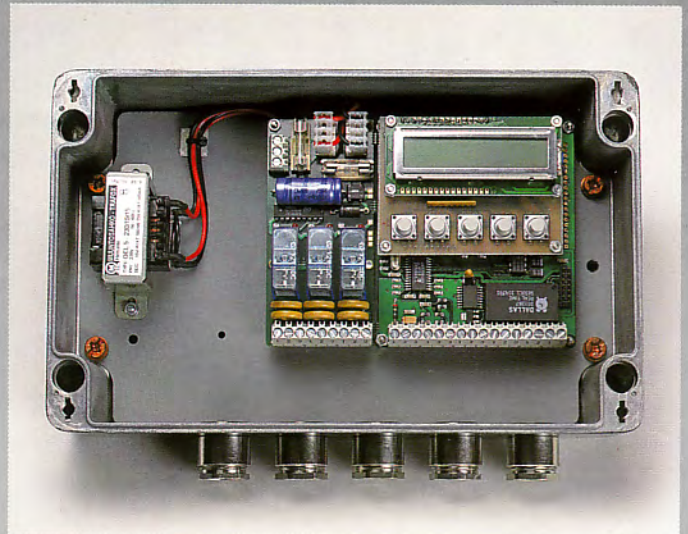
RS 232 C connectable thermo tape printer or form printer

Function:

The operation of OPU is based on the accounting algorithm developed by Tamtron, which enables accurate and reliable overload control even in difficult conditions. OPU has a function which eliminates disturbance caused by swinging movement of the load or bridge.

The installation of OPU is easy. Calibration is done digitally with OPU's own keyboard and numeric display without any tools or measuring equipment. Calibration is possible also with partial loads. Alarm limits are set as numeric values using keyboard.

In addition to overload OPU controls the effective running time of crane, which can be read out from OPU display. Through control it is possible to optimize the maintenance of the crane.



Output:

- 2 pcs RS 232 C/485 serial ports
- 3 pcs relay 250 VAC 10 A, with change over contacts
- As an option 4 - 20 mA current signal amplifier

Input:

- 2 pcs analog measurement channels for load cells
- 2 pcs RS 232C/485

Accuracy:

Typically $\pm 0,05 - 2 \%$ depending on application

OPU stores the overloads with time and date to memory from which the overload data can be retrieved to display, PC, printer or crane's monitoring device.

OPU monitors both its own working order and the condition of the cables and the weighing load cells. OPU overload indicators can be linked to programmable logic circuits (PLC) and can be linked with each other. They can be installed to both new and used hoist machines.

Load cells

Wide selection of load cells for demanding use

Tamtron load cells are manufactured in clean room facility. Own load cell production enables optimized load cells for each solution. Through clean room facility and quality control is ensured the accuracy, durability and reliability of the load cells. The load cells are calibrated using verified weights. For each load cell manufactured by Tamtron is issued a calibration certificate and granted a warranty.

Tamtron manufactures various weighing load cells for demanding use. The selection includes load cells from cost-effective load cells to modified load cells for special use. Alternative load cells are tension, axle, chain, bending, compression, pressure and element load cells and load cells for special solutions. In overload control the location of the load cell can be an axle sheave, axle

support bar, fixed end of the rope, lifting rope or the load cells can be installed under the lifting machinery.

Technical data:

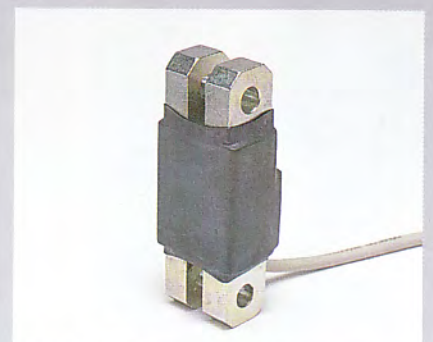
- output signal typically 2 mV/V
- supply voltage 5 - 12 VDC
- breaking strength 500 % of capacity
- allowed peak load 200 % of capacity
- temperature compensated
- protection class IP 65
- protected against corrosion



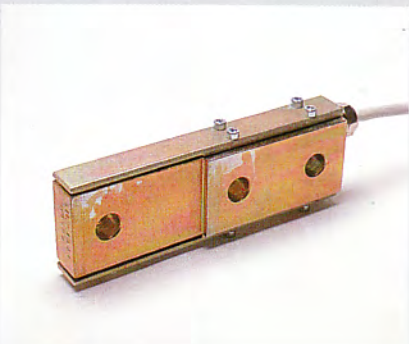
Axle load cell ATLK



Rope load cell ATL-VA



Chain load cell ATKV



Bending load cell ATL



Compression load cell APLK



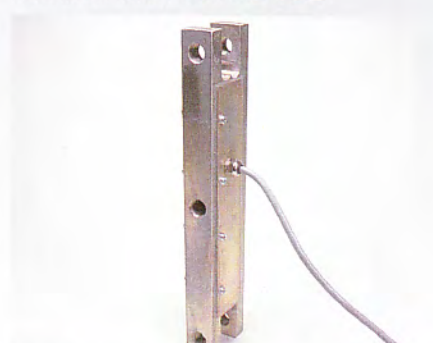
Tension load cell ABCSE



Pressure transducer



Load cells for special



Element load cell

Load cells and displays can be used for weighing also without OPU overload indicator.