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WA-903+ Weighing Transmitter

Ethernet transmitter for demanding applications

- Local weighing electronics on the field, protected IP66
- Legal-for-trade temperature range -30... +50°C
- Own measuring channel for each load cell (4 tai 8 channels)
- Automatic corner adjustment
- Separate load cell monitoring and fault diagnostics functions
- Electronics can be replaced without readjustment and reverification
- Ethernet as standard feature ModBus/TCP
- Fieldbus as option: Profibus DP, DeviceNet, Ethernet/IP

SMART WA-903+ FOR VERSATILE APPLICATIONS

WA-903+ is a multi-channel (max 8 channels) legal-for-trade weighing transmitter. Since the output signals of connected load cells are digitized individually, the signal of each load cell can be accessed at any time.

This is of particular benefit to enable:

- upon commissioning automatic corner adjustment
- in operation analysis of the load distribution on the scales, load cell monitoring
- in case of a fault rapid identification of the components affected
- in weighing systems multi-scale transmitter, different capacity load cells in the same scale

INTERFACES

WA-903+ has Ethernet interface as standard feature (ModBus/TCP protocol). Optional fieldbus interfaces available are Ethernet/IP, Profibus DP, DeviceNet, Modbus RTU.

The integrated I/O signals allow direct control of time-critical signals such as overload, dosing cutoff etc.

There is one USB-interface for "alibi memory" available when transferred weighing data in legal-for-trade weighing systems.

One analog input or one analog output is available for analog interfaces.

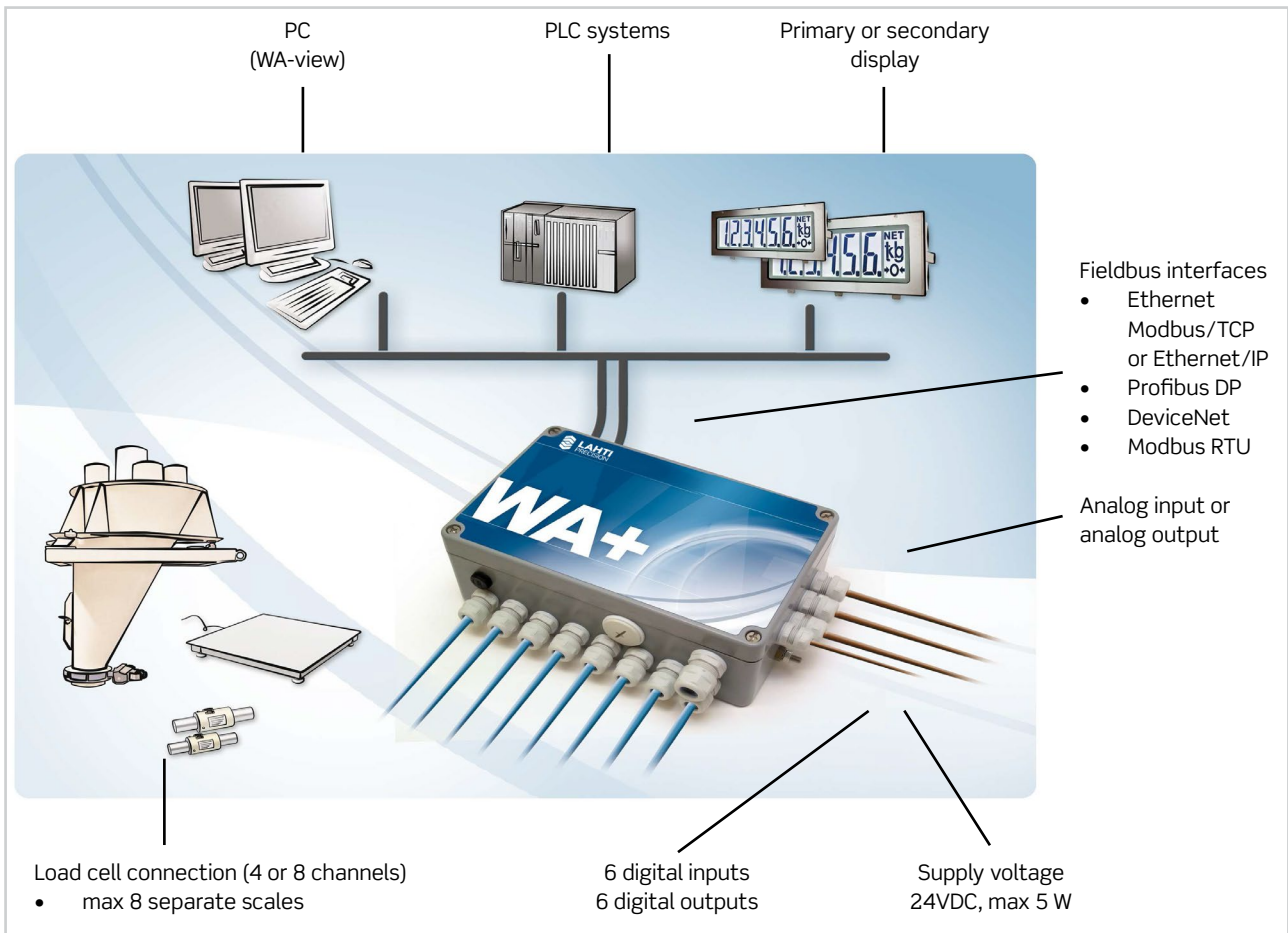
WA-VIEW FOR LEGAL-FOR-TRADE APPLICATIONS

WA-903+ has EC-type approval for single range, multi-range and multi-interval legal-for-trade weighing applications.

It is possible to realize a multiscale transmitter for even 8 scales. PC with WA-view-program is used as a comfortable user interface and a weighing display. Data exchange with other programs can be easily realized.

WA-view has versatile features :

- taring
- zero-setting
- zero-tracking
- indication of zero-point
- form editor for printing
- scale parameter setting
- scale adjustment
- scale signal filtering



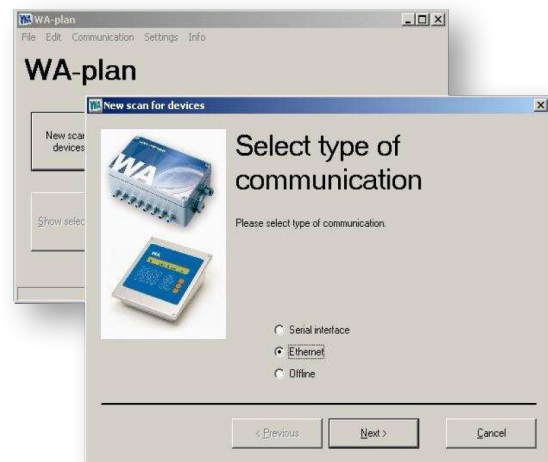
WA-PLAN TOOL FOR CONFIGURATION /ADJUSTMENT

When WA-903+ is used with WAview, configuration and adjustment can be done with WA-view.

Alternatively by WA-plan tool the complete status of WA-903+ can be read up (backup) and loaded down (restore) into a similar device or a replacement if necessary. WA-plan allows access to all parameters for the complete calibration and can indicate weight values if required. Also program updates can be downloaded by WAplan.

WA-plan runs on the platforms Windows 2000, XP and Windows 7. It communicates with the WA- 903+ units either point-to-point, via an RS485 bus or via Ethernet.

The same WA-plan tool is used also with other WA-900 and WA- 800 products.



VERSATILE DIAGNOSTIC FUNCTIONS INCREASE THE OPERATIONAL SAFETY

The individual load cell signals can also be accessed separately during operation, in order to e.g. monitor the sensors or, in case of a fault, to localize quickly the source of the fault.

Integrated diagnostics functions in the WA-903+ allow automatic monitoring of the load cell zeropoint and the load distribution on the scales.

Load cell simulation function can be used in process scales to replace the failed load cell data with simulated data before the failed load cell have been replaced. This will shorten the downtime during the failure.

LEGAL-FOR-TRADE VERIFICATION

WA-903+ has EC certification for legal-for-trade weighing instrument in combination with PC software WA-view or as stand-alone scales, for instance in combination with a certified display or with an operating console.

The certification allows that in case of a fault the complete active electronics can be replaced without the need for adjustment or re-calibration – all adjustment and calibration parameters are stored in a non-volatile memory in the passive part of the system. Together with the WA-plan backup / restore function, this allows downtimes to be avoided effectively.

The system's sealing concept, with no jumpers, normally allows it to keep the WA-903+ always

closed. Parameterization and adjustments are made through the serial interface, the legal-for-trade protection is performed by a change counter for the relevant parameter. This removes the risk of dirt or moisture entering the electronics during maintenance or calibration.

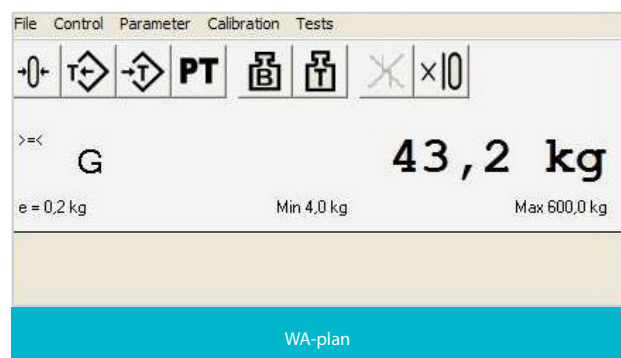
ACCESSORIES

The WA-903+ is powered by a nominal 24 V DC (permissible range 9 - 36 V). This power will often be available on-site.

However, up to three WA-903+ units can be supplied by the VNT 20410 supplementary power supply unit. The VNT 20410 can also convert a serial RS232 interface (PC COM) to RS485. This allows WA-903+ to be located at a distance of 300 m away.

There is also a scales simulator to test the hardware and the process flow, the VWZ 21000, with which up to 8 load cells can be simulated individually.

WA-903+ units with integrated overvoltage lightning protection for the load cell connections as an optional extra are also available.



WA-903+

Technical data

No. of measuring channels	4 or 8	
Measuring frequency	132 /s per each channel	
Resolution	24 bit (16.7 million)	
No. of increments in certified application	10000e, EN45501/OIML R76 class III (-30...+50°C)	
No. of increments (e) Single range Multi-range /Multi-interval scales	n ≤ 10000 n _i ≤ 6000 Max/e ₁ 15000	
Min signal/channel	ΔU_{\min}	≤ 0,5 μV/e
Signal range/channel	U _e	0...19 mV
Excitation voltage	U _{exc}	5 VAC
Load cell impedance /channel	R _{L min} R _{L max}	43 Ω 4500 Ω
Max length of interconnection cable 6-wire connection	L/A	1000 m/ mm ²
Operating temperature (certified/process usage and storage)	-30...+50°C /-30...+60°C	
Supply voltage	24 VDC (9-36 V) max 5 W	
Parameter memory	EEPROM, FLASH	
Clock/calender	Real time clock, 2 weeks back-up time	
Serial interface, fixed	S1: RS 485 2-wire, isolated S2: RS 485 2-wire, non-isolated S3: RS 232, non-isolated 9600-115000 Bauds	
Ethernet interface	Full duplex 100 Mbaud ModBus/TCP or Ethernet/IP (option)	
Fieldbus, options	Profibus DP Modbus RTU DeviceNet	
Digital inputs	6 pcs, 24V/5mA, optoisolated	
Digital outputs	6 pcs, 24V/50mA (9...35V), optoisolated	
Analog input (option)	mA, V	
Analog output (option)	0/4...20 mA, R _L ≤ 500 Ω tai 0...10V max 50 mA, galvanically isolated	
Casing	260x160x90 (LxBxH) polyester IP66	
Weight	3,0 kg	
Directives and standards Non-automatic weighing instruments Electromagnetic compatibility Low voltage directive	2009/23/EC, EN45501/OIML R76 class III 2004/108/EC 2006/95/EC	