PENKO Engineering B.V.

1020 Indicator

The Experts In Weighing & Dosing

Your partner for fully engineered factory solutions

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1020 Indicator Characteristics

Your best solution for silo and platform weighing

The 1020 high performance Indicator is an innovative Indicator adaptable to a wide range of weighing applications. Precise and fast measurement of platforms, silos, packing scales, check weighing scales and batching systems are easily achieved. High speed A/D conversion rates allow top performance and accuracy for your applications. Unique color display for easy and comfortable operation. Revolutionary digital filters (compared to conventional filters) significantly improve machine speed.

Various industrial communication protocols enable users to build up sophisticated weighing systems within an overall PLC process control system. The 1020 indicator is available ex stock and can be delivered with a very short lead time.

Fast and easy setup

- Ultra-clear visual information at your fingertips
- High-resolution 2,8 inch color TFT screen

More flexibility & functionality while saving space

- Time-saving, G-Cal™ technology (Geographical Calibration), expect for the 1020 FMD, for fast and accurate calibration without using weights anywhere on the planet.
- Compact housing with standard built in 3 DI and 4 DO.
- Plug & Play solutions for Filling, Check Weighing, Belt Weighing and Force Measurment.

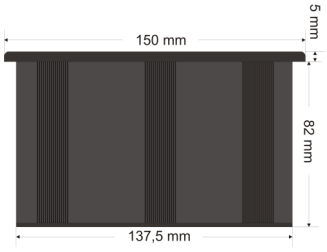
Speaks the language of your device

- RS232, RS422, RS485, Ethernet, USB, Canbus and optional Profibus.
- Various industrial protocols like Ethernet IP, Modbus TCP, Modbus RTU, FINS and optional Profibus DP.
- Communicates conveniently via remote devices

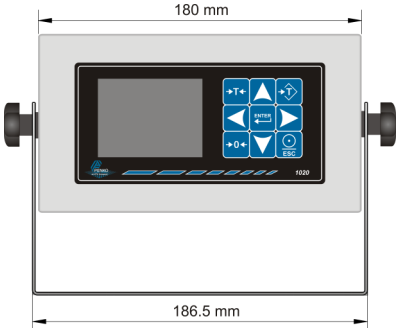
High performance

- 1600 samples per second
- 24 bit internal resolution
- 100 000 parts display resolution

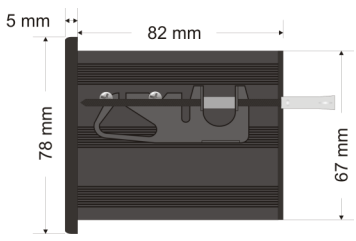
1020 Indicator Dimensions



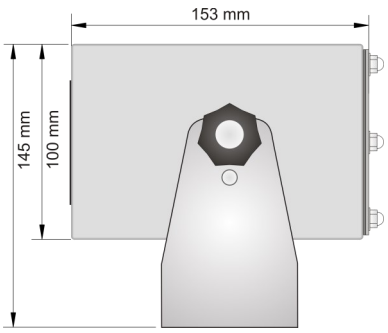
Top view



Front view



Side view



Side view

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1020 Indicator Specifications

Type	Standard	RS232/RS422/CANBUS	Profibus	Stainless steel encloser
Wiring	With sense	With sense	With sense	With sense
Type of sense	Passive	Passive	Passive	Passive
Power supply	18-32 Vdc; 7,5 W max.	18-32 Vdc; 7,5 W max.	18-32 Vdc; 7,5 W max.	18-32 Vdc; 7,5 W max.
Load cell power supply	5 Vdc	5 Vdc	5 Vdc	5 Vdc
Sensitivity	0,1 µV/d (non-certified) 0,4 µV/d (certified)	0,1 µV/d (non-certified) 0,4 µV/d (certified)	0,1 µV/d (non-certified) 0,4 µV/d (certified)	0,1 µV/d (non-certified) 0,4 µV/d (certified)
Selectable ranges	1; 1,5; 2; 2,5; 3 mV/V	1; 1,5; 2; 2,5; 3 mV/V	1; 1,5; 2; 2,5; 3 mV/V	1; 1,5; 2; 2,5; 3 mV/V
Input voltage Unipolar @ 3mV/V (not present in Force)	-1 mV to +16 mV	-1 mV to +16 mV	-1 mV to +16 mV	-1 mV to +16 mV
Input voltage Bipolar @ 3mV/V	-16 mV to +16 mV	-16 mV to +16 mV	-16 mV to +16 mV	-16 mV to +16 mV
A/D Conversion speed	1600/s	1600/s	1600/s	1600/s
Max. load cell impedance	1200 Ω	1200 Ω	1200 Ω	1200 Ω
Min. Load cell impedance	43,75 Ω	43,75 Ω	43,75 Ω	43,75 Ω
Max. no. of load cells 350 Ω	8	8	8	8
1000 Ω	22	22	22	22
Max. number of d	10.000	10.000	10.000	10.000
Display resolution	100.000	100.000	100.000	100.000
Internal resolution	24 bits	24 bits	24 bits	24 bits
Display steps	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200
Display size	2,8”; 320 x 240 pixels	2,8”; 320 x 240 pixels	2,8”; 320 x 240 pixels	2,8”; 320 x 240 pixels
Inputs, 3 (Force no count)	18-28Vdc, PNP or NPN or count ≤5kHz	18-28Vdc, PNP or NPN or count ≤5kHz	18-28Vdc, PNP or NPN or count ≤5kHz	18-28Vdc, PNP or NPN or count ≤5kHz
Outputs, 4	Max. 35V/0,5A, PNP or NPN	Max. 35V/0,5A, PNP or NPN	Max. 35V/0,5A, PNP or NPN	Max. 35V/0,5A, PNP or NPN
Analog output (optional)	0/4-20/24mA, 10.000d	0/4-20/24mA, 10.000d	0/4-20/24mA, 10.000d	0/4-20/24mA, 10.000d
Communication RS232	No	Yes	No	No
RS422/485	No	Yes	No	No
Ethernet	Yes	Yes	Yes	Yes
USB	Yes	Yes	Yes	Yes
CANBUS	No	Yes	No	No
Profibus	No	No	Yes	No
Operating temperature	-10°C to +40°C	-10°C to +40°C	-10°C to +40°C	-10°C to +40°C
Storage temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Relative Humidity	Max. 85% non-condensing	Max. 85% non-condensing	Max. 85% non-condensing	Max. 85% non-condensing
Mono filling, fixed	Option	Option	Option	Option
Check weighing, fixed	Option	Option	Option	Option
Belt weighing, fixed	Option	Option	Option	Option
Protection class	IP45	IP45	IP45	IP65
Protection class build in cabinet	IP65	IP65	IP65	
Weight	± 700g	± 700g	± 700g	± 2.100g

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This product is intended to be supplied by a Class 2 or Limited Power Source, rate 18 - 32 Vdc, 0.4A@24Vdc.

Our design expertise include systems for manufacturing plants, bulk weighing, check weighing, force measuring and process control. For over 35 years, PENKO Engineering B.V. has been at the forefront of development and production of high-accuracy, high-speed weighing systems and our solutions continue to help cut costs, increase ROI and drive profits for some of the largest global brands, such as Cargill, Sara Lee, Heinz, Kraft Foods and Unilever to name but a few.

Whether you are looking for a simple stand-alone weighing system or a high-speed weighing and dosing controller for a complex automated production line, PENKO has a comprehensive range of standard solutions you can rely on.

PENKO sets high standards for its products and product performance which are tested, certified and approved by independent expert and government organizations to ensure they meet - and even - exceed metrology industry guidelines. A library of testing certificates is available for reference on www.penko.com .

PENKO is committed to ensuring every system is installed, tested, programmed, commissioned and operational to client specifications. Our engineers, at our weighing center in Ede, Netherlands, as well as our distributors around the world, strive to solve most weighing-system issues within the same day.

On a monthly basis PENKO offers free training classes to anyone interested in exploring modern, high-speed weighing instruments and solutions.

A schedule of training sessions is found on www.penko.com/training

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