PENKO ENGINEERING B.V.

Optimising Precision Weighing

PENKO
an ETC Company

1020 Indicator

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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
- Timesaving, 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
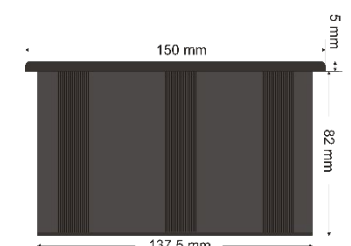 Weighing and Force Measurement.

Speaks the language of your device
- RS232, RS422, Ethernet, USB, CAN interface and optional Profibus or Profinet.
- Various industrial protocols like Ethernet IP, Modbus TCP, Modbus RTU, FINS and optional Profibus DP or Profinet.
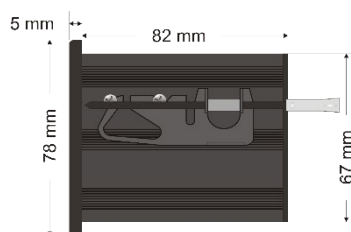- Communicates conveniently via remote devices

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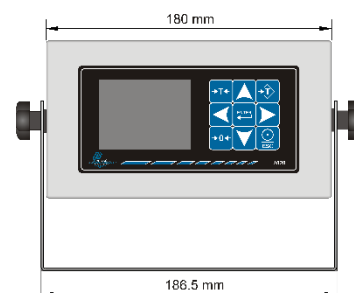- 24 bit internal resolution
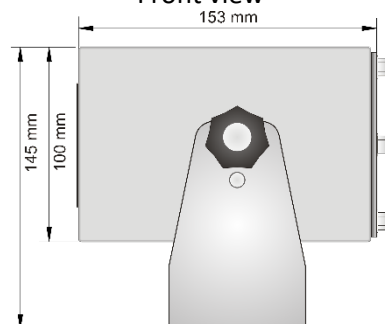- 100 000 parts display resolution

1020 Indicator Dimensions

Top view

Side view

Front view

Side view

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1020 Indicator Specifications

.	Standard	RS232/RS422	Profibus	Profinet	Stainless steel encloser
Wiring	With sense	With sense	With sense	With sense	With sense
Type of sense	Passive	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.	18-32 Vdc; 7,5 W max.
Load cell power supply	5 Vdc	5 Vdc	5 Vdc	5 Vdc	5 Vdc
Sensitivity	0,1 µV/d (non-certified)	0,1 µV/d (non-certified)	0,1 µV/d (non-certified)	0,1 µV/d (non-certified)	0,1 µV/d (non-certified)
Selectable ranges	0,4 µV/d (certified)	0,4 µV/d (certified)	0,4 µV/d (certified)	0,4 µV/d (certified)	0,4 µV/d (certified)
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	-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	-16 mV to +16 mV
A/D Conversion speed	1600/s	1600/s	1600/s	1600/s	1600/s
Max. load cell impedance	1200 Ω	1200 Ω	1200 Ω	1200 Ω	1200 Ω
Min. Load cell impedance	43,75 Ω	43,75 Ω	43,75 Ω	43,75 Ω	43,75 Ω
Max. no. of load cells 350 Ω	8	8	8	8	8
1000 Ω	22	22	22	22	22
Max. number of d	10.000	10.000	10.000	10.000	10.000
Display resolution	100.000	100.000	100.000	100.000	100.000
Internal resolution	24 bits	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	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	2,8"; 320 x 240 pixels
Inputs, 3 (Force no count)	18-28Vdc, PNP or NPN or Counter inputs <= 1kHz @ 24VDC with 50% duty cycle	18-28Vdc, PNP or NPN or Counter inputs <= 1kHz @ 24VDC with 50% duty cycle	18-28Vdc, PNP or NPN or Counter inputs <= 1kHz @ 24VDC with 50% duty cycle	18-28Vdc, PNP or NPN or Counter inputs <= 1kHz @ 24VDC with 50% duty cycle	18-28Vdc, PNP or NPN or Counter inputs <= 1kHz @ 24VDC with 50% duty cycle
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	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	0/4-20/24mA, 10.000d
Communication RS232	No	Yes	No	No	No
RS422	No	Yes	No	No	No
Ethernet	Yes	Yes	Yes	Yes	Yes
USB	Yes	Yes	Yes	Yes	Yes
Profibus	No	No	Yes	No	No
Profinet	No	No	No	Yes	No
Operating temperature	-10ºC to +40ºC	-10ºC to +40ºC	-10ºC to +40ºC	-10ºC to +40ºC	-10ºC to +40ºC
Storage temperature	-20ºC to +70ºC	-20ºC to +70ºC	-20ºC to +70ºC	-20ºC to +70ºC	-20ºC to +70ºC
Relative Humidity	Max. 85% non-condensing	Max. 85% non-condensing	Max. 85% non-condensing	Max. 85% non-condensing	Max. 85% non-condensing
Mono filling, fixed	Option	Option	Option	Option	Option
Check weighing, fixed	Option	Option	Option	Option	Option
Belt weighing, fixed	Option	Option	Option	Option	Option
Force measurement, fixed	Option	Option	Option	Option	Option
Protection class	IP45	IP45	IP45	IP45	IP65
Protection class build in cabinet	IP65	IP65	IP65	IP65	
Weight	± 700g	± 700g	± 700g	± 700g	± 2.100g

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

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About PENKO

At PENKO Engineering we specialize in weighing. Weighing is inherently chemically correct, independent of consistency, type or temperature of the raw material. This means that weighing any kind of material guaranties consistency and thus, it is essential to sustainable revenue generation in any industry. As a well-established and proven solution provider, we strive for the ultimate satisfaction of custom design and/or standard applications, increasing your efficiencies and saving you time, saving you money.

Whether we are weighing raw materials, components in batching, ingredients for mixing or dosing processes, - or weighing of static containers and silos, or - in-motion weighing of railway wagons or trucks, by whatever means required during a process, we are essentially forming vital linkages between processes and businesses, anywhere at any time. We design, develop and manufacture state of the art technologically advanced systems in accordance with your strategy and vision. From the initial design brief, we take a fresh approach and a holistic view of every project, managing, supporting and/or implementing your system every step of the way. Curious to know how we do it? www.penko.com

Certifications

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/nl/publications_certificates.html

PENKO Professional Services

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. Training sessions on request:
www.penko.com/training

PENKO Alliances

PENKO's worldwide network: Australia, Brazil, China, Denmark, Germany, Egypt, Finland, France, India, Italy, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Syria, Turkey, United Kingdom, South Africa, Slovakia Sweden and Switzerland, Singapore.
A complete overview you will find on: www.penko.com/distributor