

PENKO ENGINEERING B.V.

Optimising Precision Weighing



1020 Indicator

PENKO Engineering B.V.

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 Measurement.

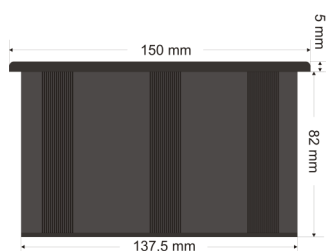
Speaks the language of your device

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

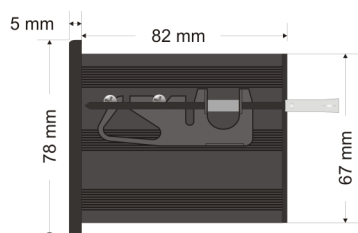
High performance

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

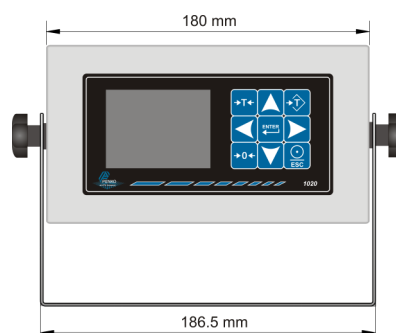
1020 Indicator Dimensions



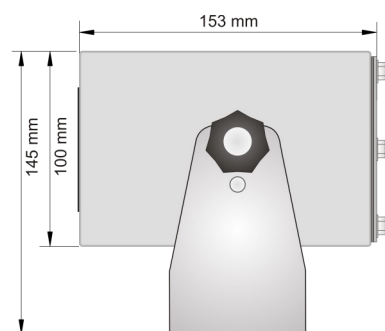
Top view



Side view



Front view



Side view



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1020 Indicator Specifications

Type	Standard	RS232/RS422/CANBUS	Profibus	Stainless steel enclosure
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 μ V/d (non-certified) 0,4 μ V/d (certified)	0,1 μ V/d (non-certified) 0,4 μ V/d (certified)	0,1 μ V/d (non-certified) 0,4 μ V/d (certified)	0,1 μ V/d (non-certified) 0,4 μ V/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	8	8	8	8
	350 Ω			
	1000 Ω	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 \leq 5kHz	18-28Vdc, PNP or NPN or count \leq 5kHz	18-28Vdc, PNP or NPN or count \leq 5kHz	18-28Vdc, PNP or NPN or count \leq 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
	RS422/485	No	Yes	No
	Ethernet	Yes	Yes	Yes
	USB	Yes	Yes	Yes
	CANBUS	No	Yes	No
	Profibus	No	No	Yes
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
Force measurement, fixed	Option	Option	Option	Option
Protection class	IP45	IP45	IP45	IP65
Protection class build in cabinet	IP65	IP65	IP65	
Weight	\pm 700g	\pm 700g	\pm 700g	\pm 2.100g



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



Certifications

PENKO sets high standards for its products and product performance to ensure they meet - and even - exceed metrology industry guidelines. As of 2016 PENKO is ISO9001 certified, giving our long term quality work the official stamp of approval. Additional certificates are available on:
www.penko.com

PENKO is a member of the Association of Dutch Suppliers of Weighing Equipment (VLW) and represented in the European Weighing Association (CECIP).



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