4 channel FLEX

SPECIFICATIONS

Specification for each individual weighing channel (Channel 1-4):

Wiring	Full Wheatstone bridge with passive connections (6-wire system).
Sense system	Passive sense system
Minimum bridge resistance	87.5 Ohm @ 5V exc.
Number of load cells	1 channel 1 - 4 Load cells 350 Ohm @ 5V exc. 1 - 8 Load cells 1100 Ohm @ 5V exc.
Sensitivity	0.1 – 0.5 µV minimum voltage for verification scale Certified with 0.4 µV per part / 10000 parts
A/D Conversion Speed	1600 measurements per second
Internal Resolution	24 Bits (16,777,216 parts)
A/D Converter type	Sigma-Delta, ratio metric, isolated from digital
Display Resolution	100,000 divisions max.
Display Step	x1, x2, x5, x10,x 20 x50, x100, x200.
Decimal Comma	Selectable between any digits of the display value
Full Scale Range	-2.5 mV to +11.25 mV (-0.5mV/V to +2.25mV/V)
Excitation voltage	5 VDC
Non Linearity	< 0.005 % of reading
Offset Drift	< +/- 2 ppm/℃
Span Drift	< +/- 2 ppm/℃
Digital Filters	High performance digital filters 1-10 Hz
Overall Filter	0 to -50 dB
Calibration Methods	Dead load and Span with up to 8 point linearization, Millivolt calibration

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	G - CAL (Gravity correction) Calibration of 4 analog inputs and 4 analog outputs with individual coefficients.
Measurement Functions	Automatic zero tracking, motion detection, zero, tare, preset tare, net mode, peak hold, valley hold, bar graphs multi range, multi interval
Memory Allocation	Calibration data Flash, dynamic data in SRAM with battery backup.
Real-Time Clock	Standard with NiMh battery backup.
Display methods	Each channel separate Total weight of selected channels

ENVIRONMENTAL

Operating Temp	-10℃ to +40℃ [14℉ to 104℉]
Storage Temp	-20℃ to +70℃ [-4℉ to 158℉]
Relative Humidity	40 – 90% non-condensing.

APPROVALS (PENDING)

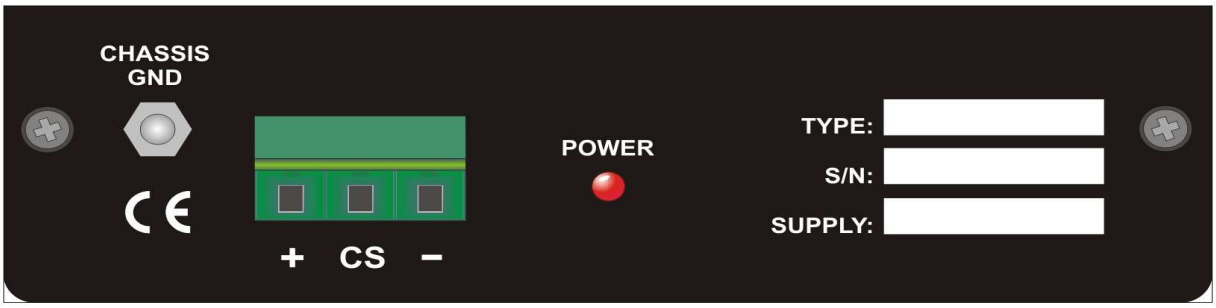
OIML R76	*10 000d single or multi interval at ≥0,4 µV scale interval.*
MID certified	
OIML R51	*Automatic catch weigher*
OIML R61	*Automatic gravimetric filling instrument*
OIML R106	*Automatic rail weigh bridge*
OIML R107	*Discontinuous totalizer*
EU-type approval no	

TOUCH SCREEN

Display type	High resolution TFT LCD 640 x 480 pixels, 256 colors, High brightness 500 cd/m2. High Contrast 350:1
Display functions	Completely menu driven with graphical user interface
Display Rate	Selectable 1,2,3,5,10 or 25 updates/s
Display Filter	0, -6, -12, -18, -24, -30, -36, -42 and – 50 dB
Display Filter range	Selectable in any range of the weight display
Display suppression	Selectable in any range of the weight display
Status enunciators	Zero, No Motion.
Weight Digits	6 digits with leading zero suppression, selectable height = 18mm or 9 mm.
Display operation	Operate, configure and calibrate via four interfaces 1- Front panel, (Touch screen) 2- RS232 3- Ethernet 4- USB
Touch screen	Glass screen, 2 mm of resistive type
Display size	5,7 inch, (145 mm)
Display material	Front foil PET 175 u

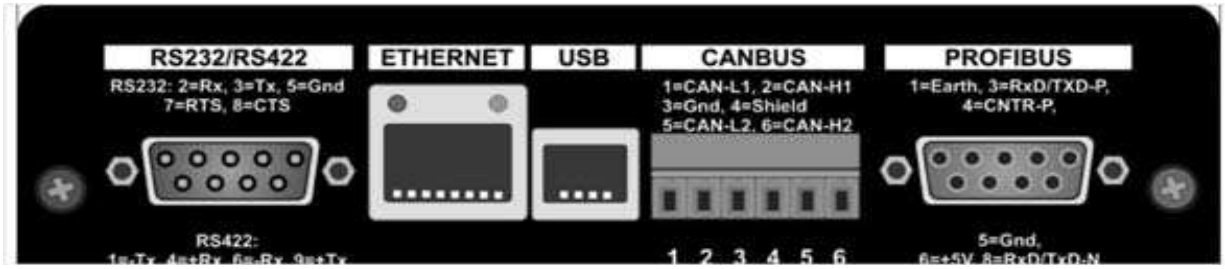
ELECTRICAL

AC Power Supply 100 – 240 VAC 50/60 Hz, 20W max.



24 V DC Power Supply 10,8 – 31,2 V DC, 20W max

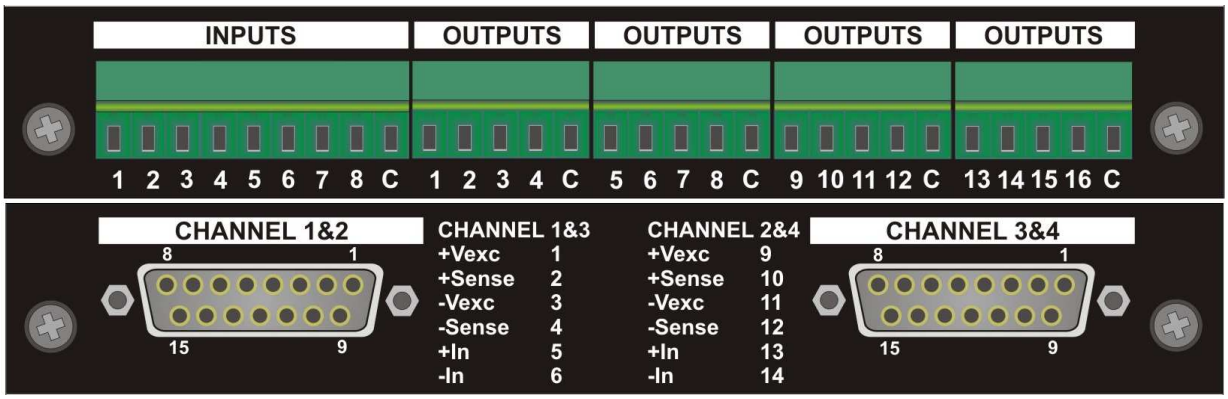
STANDARD COMMUNICATION PORTS



RS 232	Printer, ASCII, TP slave, TP Master, NPV Slave, NPV Master, AMI Master, Hostlink Viewteq, Hostlink PLC
RS 422/RS485	Printer, ASCII,TP slave, TP Master, NPV Slave, NPV Master, AMI Master, Hostlink Viewteq, Hostlink PLC
Ethernet	TCP/IP, UDP layer with PENKO TP protocol
USB	Reporter, ASCII and TP slave FLEX II has USB HOST or Device HOST = USB Stick (FAT 16) HID class keyboard or mouse
CANBUS -CAN1 port -CAN2 port	Buslink
OPTIONAL COMMUNICATION	PROFIBUS, DP-slave

COMMUNICATION SOFTWARE
Profibus GSD File
Penko Two Phase Protocol
Printer protocol

STANDARD Digital Inputs (DI) and Digital Outputs (DO) and load cell strain gauge amplifier PCB



8 Digital Inputs	8 DI, optical isolated, 1 common, 18-36 VDC, PNP or NPN. Input 1 normal or counter input max. 8kHz.
16 Digital Outputs (level cont.)	4 x 4 DO isolated PhotoMOS outputs, 1 common max. 36 VDC or AC, max 0.5A. Nominal, 1 A Surge (thermal fuse 0.5A), PNP or NPN.

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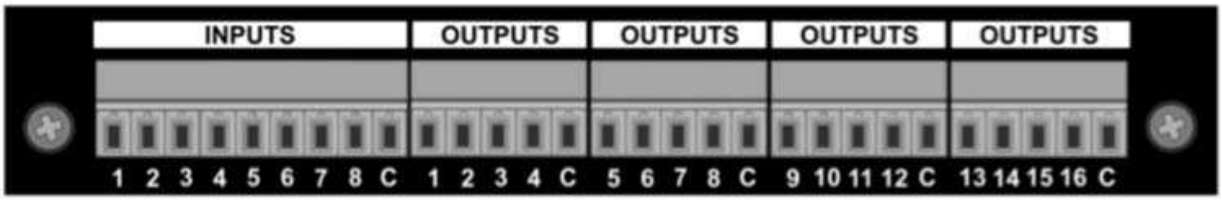
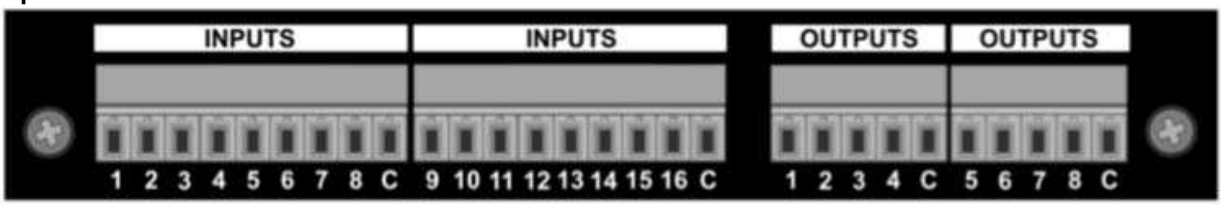
OPTION BOARDS (for one available slot)

Option 1: FLEX 8I16O



8 Digital Inputs	8 DI optical isolated, 1 common, 18-36 VDC, PNP or NPN. Input 1 to 4 normal or counter inputs.
16 Digital Outputs	16 DO isolated PhotoMOS outputs, 4 commons max. 36 VDC or AC, max 0.5A. Nominal, 1 A Surge. (thermal fuse 0.5A), PNP or NPN.

Option 2: FLEX 16I8O



16 Digital Inputs	16 DI optical isolated, 2 commons, 18-36 V Input 1 to 4 normal or counter inputs.
8 Digital Outputs	8 DO isolated PhotoMOS outputs, 2 commons max. 36 VDC or AC, max 0.5A. Nominal, 1 A Surge (thermal fuse 0.5A), PNP or NPN.

Option 3 ANALOG INPUTS / OUTPUTS

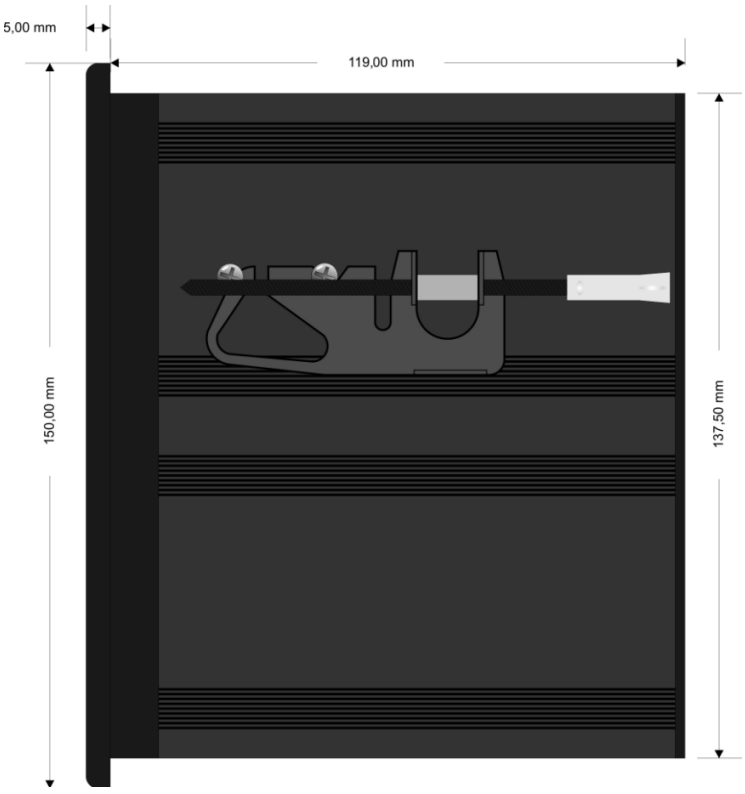
4 Analog In	2 AI isolated voltage inputs, 16 Bits, 0 – 10VDC 2 AI isolated current inputs, 16 Bits, 0/4 - 20/24mA
4 Analog Out	4 AO isolated current outputs, 16 Bits, 0/4 - 20/24mA.

Option 4 PT100/DI/DO/USB

2 PT100 input	2 x PT100 inputs
8 Digital Inputs	8 DI optical isolated, 1common, 18-36 VDC, PNP or NPN.
8 Digital Outputs	8 DO isolated PhotoMOS outputs, 2 commons max. 36 VDC or AC, max 0.5A. Nominal, 1 A Surge (thermal fuse 0.5A), PNP or NPN.
1 x USB port	Printer, ASCII and host functions

HOUSING

Material	Housing extruded aluminum, black powder coating Front machined aluminum, black anodized.
Dimensions Front: W x H x D	170 x 150 x 5 mm. depth
Dimensions Housing: W x H x D	137,5 x 137,5 x 119 mm. (depth without connectors).
Dimensions Panel cut out	138,5 x 138,5
Weight without options	appr. 1700 g.
Option board weight	appr. 120 g. (4 AI, 4 AO I/O board)
Option board weight	appr. 75 g. (8 DI, 16 DO)
Option board weight	appr. 75 g. (16 DI, 8 DO)
Mounting clips	2 mounting clips
Rubber seal	O-ring of mosrubber
Built in cabinet	IP 45
If build in a cabinet (Front)	IP 65



Side view

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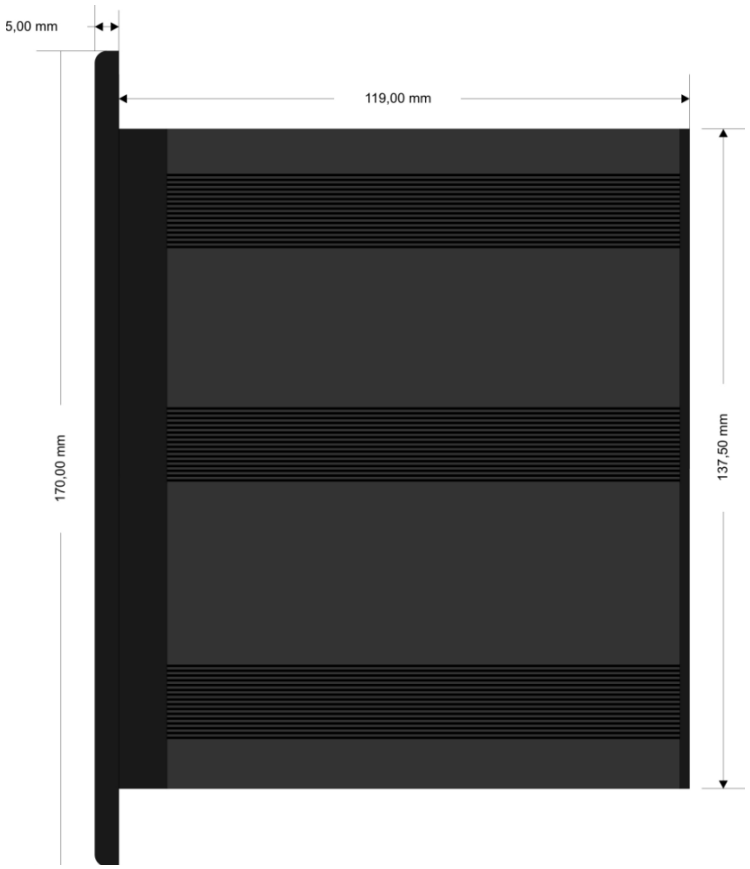

Bottom /top View

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