S-Box Silo Weighing System

FEATURES

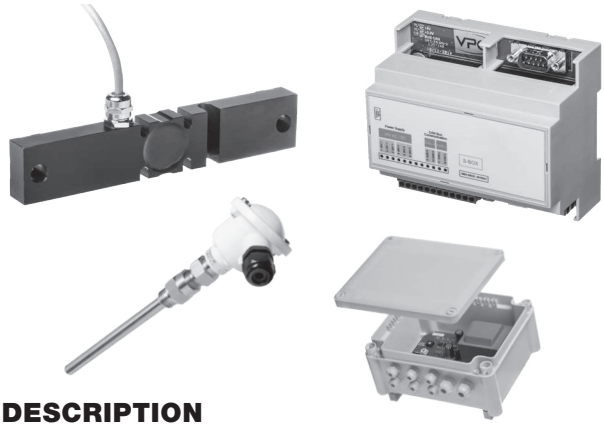
- Appropriate for DIN rail mounting
- Embedded web server
- Powerful 32-bit x 86 microprocessor
- Language Interface available in English, French, German and Spanish
- Voltage rating: 24 VDC/125 mA
- Modbus TCP connection as standard
- Measurements are displayed on a website interface with any computer connected to the same network
- Up to 24 silo weight measurements and 48 temperature measurements
- Up to 8 deported casings and deported temperature casings
- Recommended load cell for weighing measurements: 178 extensometer

OPTIONAL

- Ethernet IP connections available
- Up to 4 relay interface casings (16 relay outputs per casing)
- Up to 48 temperature control sensors (PT100)

APPLICATIONS

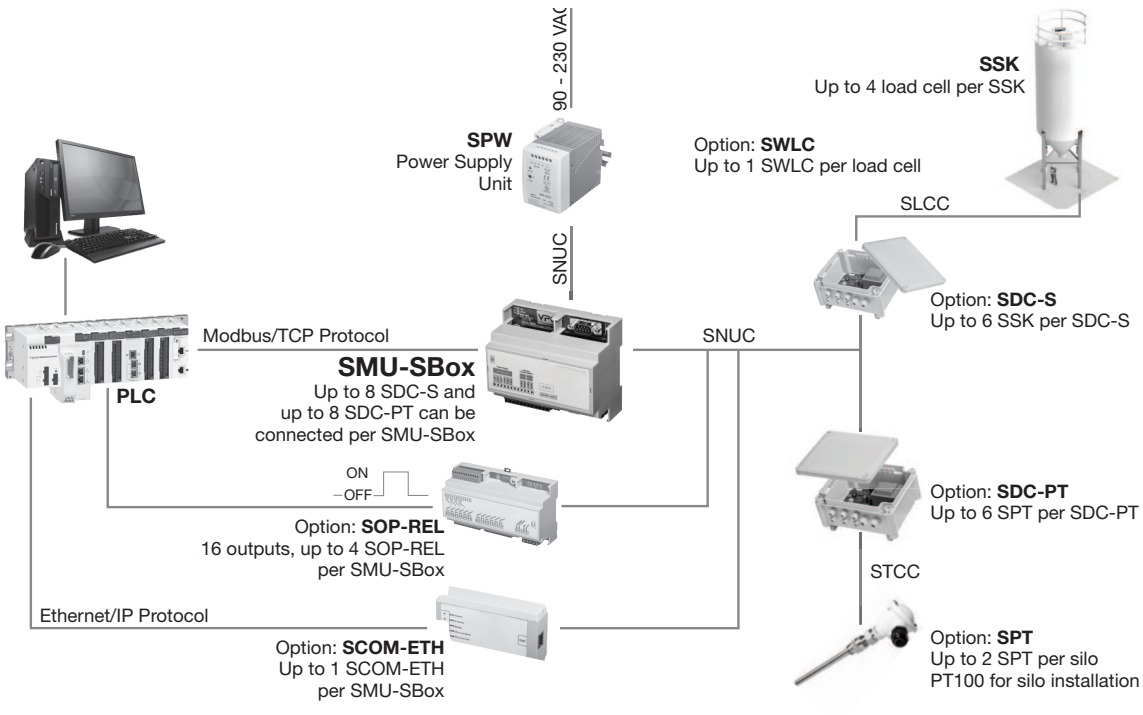
- Cement plant – aggregates storage tank
- Water treatment plant – storage/ batching tank
- Agriculture (weighing measurements only) – grain vessel
- F&B industry (weighing measurements only) – dairy storage plant, brewery, filling machine



DESCRIPTION

Our modern and intuitive system can provide low uncertainty and highly repeatable weighing and temperature measurements. Our S-Box device will allow many different measurements to be displayed on one interface. Its user friendly website is easy to use and will allow the user to consult its measurements from any computer connected on the same network. Up to 24 silos can be supported with an option of up to a total of 48 PT100 Temperature Sensors, up to 4 relay interface casings and an Ethernet IP connection.

CONFIGURATION



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S-Box Silo Weighing System

SPECIFICATIONS

S-BOX CONTROLLER (SMU-SBOX)

Performance

Silo Weight Measurement Up to 24

Temperature Measurement Up to 48

Microcontroller Vortex86DX with 32-bit, reprogrammable on-board from USB

Data Storage 8GB

Environmental

Operating Temperature 0 to +50°C (32 to 122°F)

Storage Temperature -20 to +70°C (-4 to 158°F)

Maximum Humidity Before Condensation 90%

Display and Keyboard

Display Web Interface

Available Languages English, French, German and Spanish

Electrical

Voltage 24VDC

Current Rating 125 mA

Wattage 10 W

Enclosures

Dimensions 105 x 90 x 60 mm L X H X D (4.13 x 3.54 x 2.36")

Mounting DIN Rail

Electrical Connections 3.81 mm (0.15") removal terminal blocks

POWER SUPPLY UNIT (SPW)

Input Voltage 90/230 VAC

Output Voltage 24 VDC

Power Output 100 W

Dimensions 100 X 55 X 90 mm L X H X D (3.94 x 2.17 x 3.54")

Mounting DIN Rail

DEPORTED CASING - SILO (SDC-S)

Input Voltage 24 VDC

Output Voltage 5 VDC

Wattage 17 W

Measuring Range -2.4 to +2.4 mV/V

Input Sensitivity 0.002 mV

Microcontroller Microchip PIC32

Data Storage 2 MB

Dimensions 190 x 170 x 100 mm L X H X D (7.48 x 6.69 x 3.94")

Operating Temperature -10 to +50°C (14 to 122°F)

Storage Temperature -20 to +70°C (-4 to 158°F)

CAN Bus Up to 8 Deported Casing can be connected on the same bus

SILO KIT (SSK)

Junction Box Dimensions 80 X 80 X 52 mm L X H X D (3.15 x 3.15 x 2.05")

Junction Box Material Polystyrene

Studs Dimensions 25 X 25 X 12 mm L X H X D (0.98 x 0.98 x 0.47")

Studs Thread 3/8 inches

Studs Material Steel

Template Dimensions 178 X 25 X 15 mm L X H X D (7.01 x 0.98 x 0.59")

Template Material Steel

PT100 TEMPERATURE SENSOR (SPT)

Material Stainless steel

Connection ½" male cylindrical gas

Probe Length 200 mm (7.87")

Dimensions 300 x 100 x 70 mm L X H X D (11.81 x 3.94 x 2.76")

Probe 3-wire PT100 ceramic IEC 60751 class A

Operating Temperature -50 to +450°C (-58 to 842°F)

Storage Temperature -50 to +450°C (-58 to 842°F)

DEPORTED TEMPERATURE CASING (SDC-PT)

Output Voltage 24 VDC

Wattage 6.5 W

Measuring Range -50 to +150°C (-58 to 302°F)

Microcontroller Microchip PIC32

Data Storage 2 MB

Dimensions 190 x 170 x 100 mm L X H X D (7.48 x 6.69 x 3.94")

Operating Temperature -10 to +50°C (14 to 122°F)

Storage Temperature -20 to +70°C (-4 to 158°F)

WEATHER SHIELD – 178 LOAD CELL (SWLC)

Dimensions 600 x 150 x 242 mm L X H X D (23.62 x 5.91 x 9.53")

Material Aluminum

Material Width 1 mm (0.04")

Mounting Collar clamping

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RELAY INTERFACE CASING (SOP-REL)

Max Relay Outputs Per Casing 16
Max Relay Output Voltage 24 VDC
Relay Current Rating 1 Amps
Max Switching Power 30 W
Life Expectancy 100,000 ops
Operating Temperature -10 to +50°C (14 to 122°F)
Storage Temperature -20 to +70°C (-4 to 158°F)
Input Voltage 24 VDC
Wattage 6 W
Microcontroller Microchip PIC32
Dimensions 160 x 90 x 58 mm L X H X D (6.30 x 3.54 x 2.28")
CAN Bus Up to 4 Interface Casing can be connected on the same bus

ETHERNET IP (SCOM-ETH)

Microcontroller Atmel CC01
Operating Temperature -10 to +50°C (14 to 122°F)
Storage Temperature -20 to +70°C (-4 to 158°F)
Output Voltage 24 VDC
Wattage 2.5 W
Max Simultaneous Connection 5
Max Number of Request 10 per seconds
Electrical Connection RJ-45
Connection Speed 10 to 100 mbps
Dimensions 125 x 70 x 30 mm L X H X D (4.92 x 2.76 x 1.18”)

RECOMMENDED LOAD CELLS

Model 178 Load Cell

Note: Please refer to model’s datasheet for further information. Refer to Document no: 63999.

All specifications are subject to change without notice.

If you require any further information about any of the modules, please contact vpgfs.marketing@vpgsensors.com.

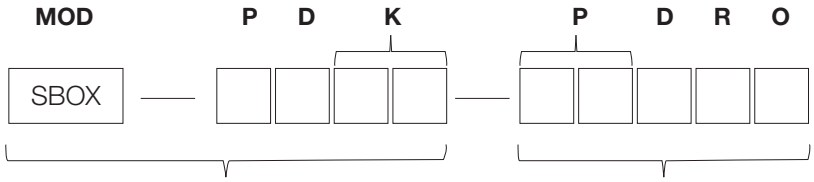
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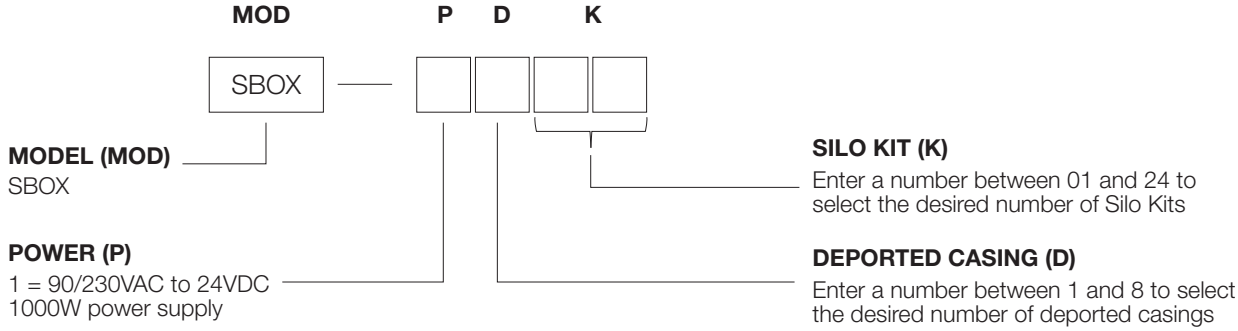
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ORDERING INFORMATION FOR S-BOX

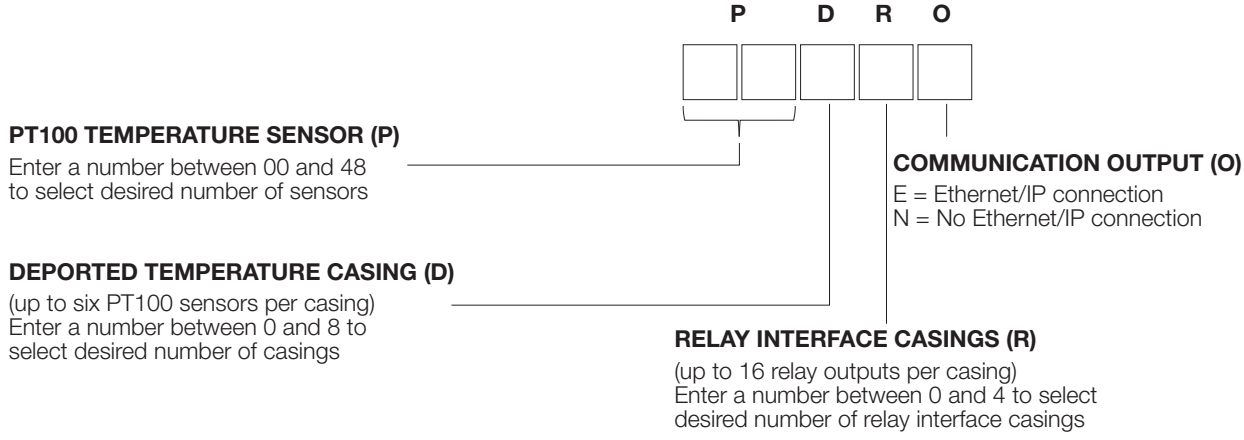
Complete item number



Mandatory section of item number



Optional section of item number



Example Complete Item Selection Number:

SBOX – 1515 – 3062E. SBOX with 90/230 VAC to 24 VDC 100 W power supply,
5 deported casings, 15 silo kits, 30 temperature sensors, 6 deported temperature casings,
2 relay interface casings, and an Ethernet/IP connection.

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COMPONENTS FOR INDIVIDUAL PURCHASE

RTSP	XXXX

RTSPSBOX	=	MAIN CONTROL UNIT	RTSPSPT	=	PT100 TEMPERATURE
RTSPSPW	=	POWER SUPPLY UNIT	RTSPSDCPT	=	DEPORTED TEMP CASING FOR 6 PT100s
RTSPSDCS	=	DEPORTED CASING FOR 6 SILO KITS	RTSPSOPREL	=	OUTPUT - RELAY INTERFACE CASING
RTSPSSK	=	SILO KIT	RTSPSCOMETH	=	COMMUNICATION – ETHERNET/IP
RTSPSLCC	=	LOAD CELL AND SILO KITS CABLE	RTSPSNUC	=	COMMUNICATION CABLE (CAN BUS)
RTSPSTCC	=	TEMP SENSOR CABLE	RTSPSWLC	=	LOAD CELL WEATHER SHIELD

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