

Wall-/Pipe Mounted Universal Process Indicator

C160



- **High visibility LED display**
 - the clearest view of your process status
- **0.1% measurement accuracy**
 - precise indication of process measurement
- **IP66/NEMA4X wall-/pipe-mounted weatherproof enclosure**
 - reliability in the harshest environments
- **Analog and relay outputs as standard**
 - alarm and retransmission facilities built-in
- **Totalizer and math functions**
 - 6-digit totals and max./min. values
- **Universal process input with transmitter power supply**
 - direct connection for any process signal
- **RS485/Modbus serial communications**
 - SCADA, PLC and open system integration



C160
– reliable process indicator,
wherever it's needed



C160

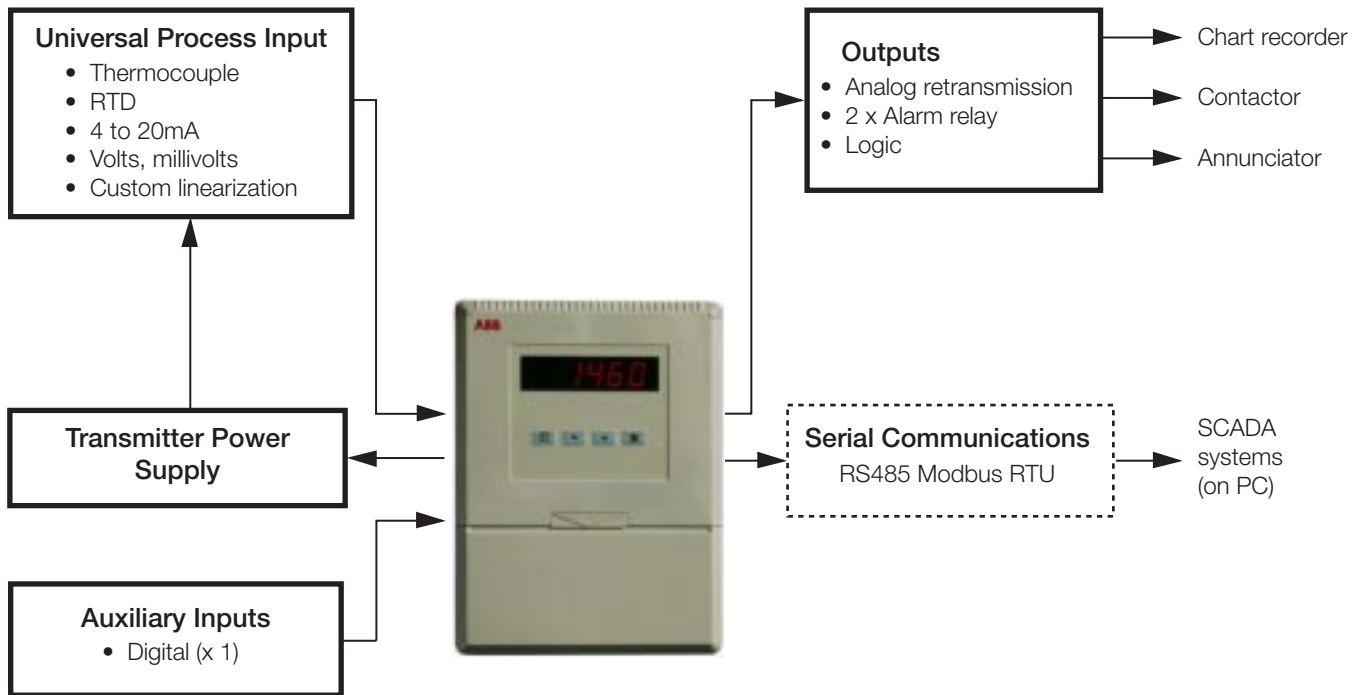
The C160 Universal Wall-mounting Indicator is a highly versatile, 5-digit industrial display indicator, with the capability to measure and indicate temperature, pressure, flow, level and other process variables.

The standard C160 provides a retransmission output and two alarm relays, with the option to add RS485 communications to suit your application.

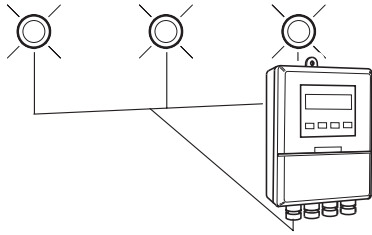
With all-round IP66/NEMA4X protection as standard, and superior RF immunity, the C160 has been designed to provide reliable indication in the harshest environments.



Pipe-mounted C160 Indicator

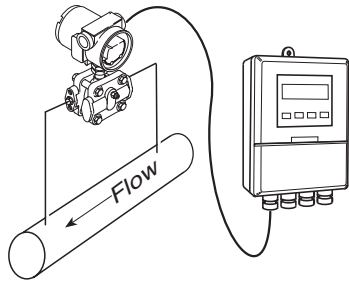


KEY: Standard Option



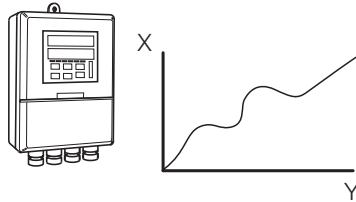
Display and Alarm

The C160's two built-in 5A relays can be used to annunciate high or low process alarms. Active alarms are indicated by flashing LEDs to the right of the main display.



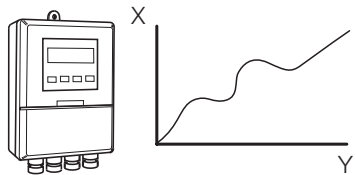
Isolated Retransmission

The C160 has, as standard, a 4 to 20mA output for retransmission of the process variable to a chart recorder or data logger.



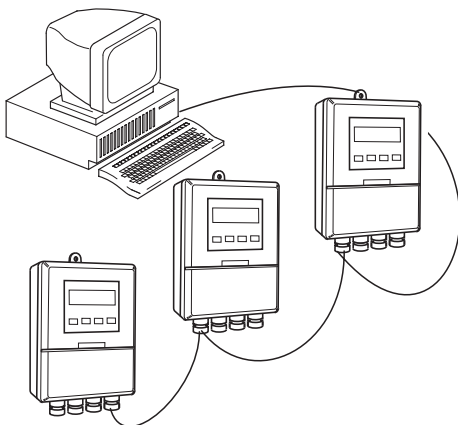
Custom Linearization

As standard the C160 has a 20-breakpoint linearizer suitable for volume calculation. (Factory setup using PC configurator).



Flow Totalization, 6 digits

A standard feature in the C160 is flow totalization. This totals any 4 to 20mA flow signal. With the built-in transmitter power supply and root extraction this makes the C160 ideal for use with Differential Pressure devices such as the WEDGEMASTER. It can also be configured for simple batch control by use of preset and predetermined totals.



RS485/Modbus

Fitted with an optional RS485 serial communication board the C160 can communicate with PLCs and SCADA systems using the Modbus protocol.

Specification

Summary

Fully user-configurable universal indicator
 IP66/NEMA4X all-round protection
 Large 5-digit display
 Totalizer/math functions as standard

Operation

Display

High-intensity 7-segment, 1 x 6-digit LED display
 Three alarm LED indicators

Display range	process value	-9999 to +99999
	totalization	0 to 999999
Display resolution		±1 digit
Display height		14mm (0.56 in.)

Configuration

User-defined via front panel or PC configurator

Standard Functions

Totalizer

Six-digit, batch and secure totals

Alarms

Number	Three user-defined
Types	High/Low process High/Low latch Fast/Slow rate

Maths function

Maximum and minimum value detection
 Average value calculation

Analog Input

Input sampling rate

250ms

Type

Universally configurable to provide:
 Thermocouple (THC)
 Resistance Thermometer (RTD)
 Millivolt
 Current
 DC Voltage

Input impedance

mA	100Ω
mV, V	>10MΩ

Linearizer functions

Programmable for:
 Square root, THC types B, E, J, K, N, R, S, T or Pt100
 Custom 20-breakpoint linearizer, set up by PC configurator

Broken sensor protection

Upscale drive on thermocouple and RTD
 Downscale drive on milliamps and voltage

Cold junction compensation

Automatic CJC incorporated as standard
 Stability <0.05°C/°C change in ambient temperature

Input protection

Common mode isolation	>120dB at 50/60Hz with 300Ω imbalance resistance
Series mode rejection	>60dB at 50/60Hz

Transmitter power supply

24V, 30mA max. to power one 2-wire transmitter

Inputs/Outputs

Retransmission

Analog, configurable in the range of 4 to 20mA
 Max. load 15V (750Ω at 20mA)
 Accuracy ≤ 0.25% of span
 Isolation 500V DC from input (not isolated from logic output)
 Assignable to Process Variable or Average PV

Logic output

Rating	18V DC at 20mA
Min. load	400Ω
Isolation	500V from input (not isolated from retransmission output)

Relay output

Number	2 standard
Rating	(SPDT) 5A at 115/230V AC
Function	Alarms, totalizer count pulse, totalizer wrap pulse or end of batch alarm.

Digital input

Type	Volt-free
Minimum pulse	250ms

Options

Modbus serial communications

Connections	RS422/RS485, 2 or 4-wire
Speed	2.4k or 9.6k baud rate
Protocol	Modbus RTU slave

Ordering Information

C160 Wall-/Pipe Mounted Universal Process Indicator	C160	/	X	X	X	X	/	X	X	X	X	X
Standard Option												
2 relays + 1 digital input + 4 to 20mA retransmission + logic output			0	1								
Modbus Option												
2 relays + 1 digital input + 4 to 20mA retransmission + logic output + RS485 Modbus			0	3								
Power Supply												
85V to 265V AC (M20 cable glands)											0	
24V DC (M20 cable glands)											1	
85V to 265V AC (NPT cable glands)											2	
24V DC (NPT cable glands)											3	
Build												
ABB Standard												0
Programming/Special Features												
Configured to factory standard												S T D
Configured to customer requirements												C U S
Special features												S P X X

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