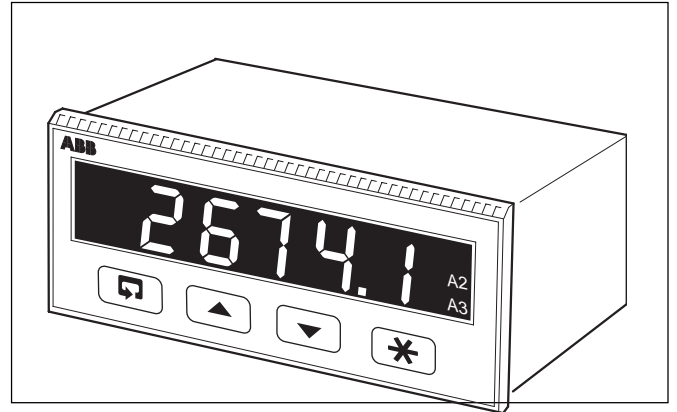


Specification DataFile

- **High visibility LED display**
 - the clearest view of your process status
- **0.1% measurement accuracy**
 - precise indication of process measurement
- **Analog and relay outputs as standard**
 - alarm and retransmission facilities built-in
- **Universal process input with transmitter power supply**
 - direct connection for any process signal
- **Hoseproof front panel and full noise immunity**
 - reliability in the harshest environments
- **RS485/MODBUS serial communications**
 - SCADA, PLC and open system integration



*COMMANDER 150 –
the 1/8 DIN indicator to match all
your display requirements*

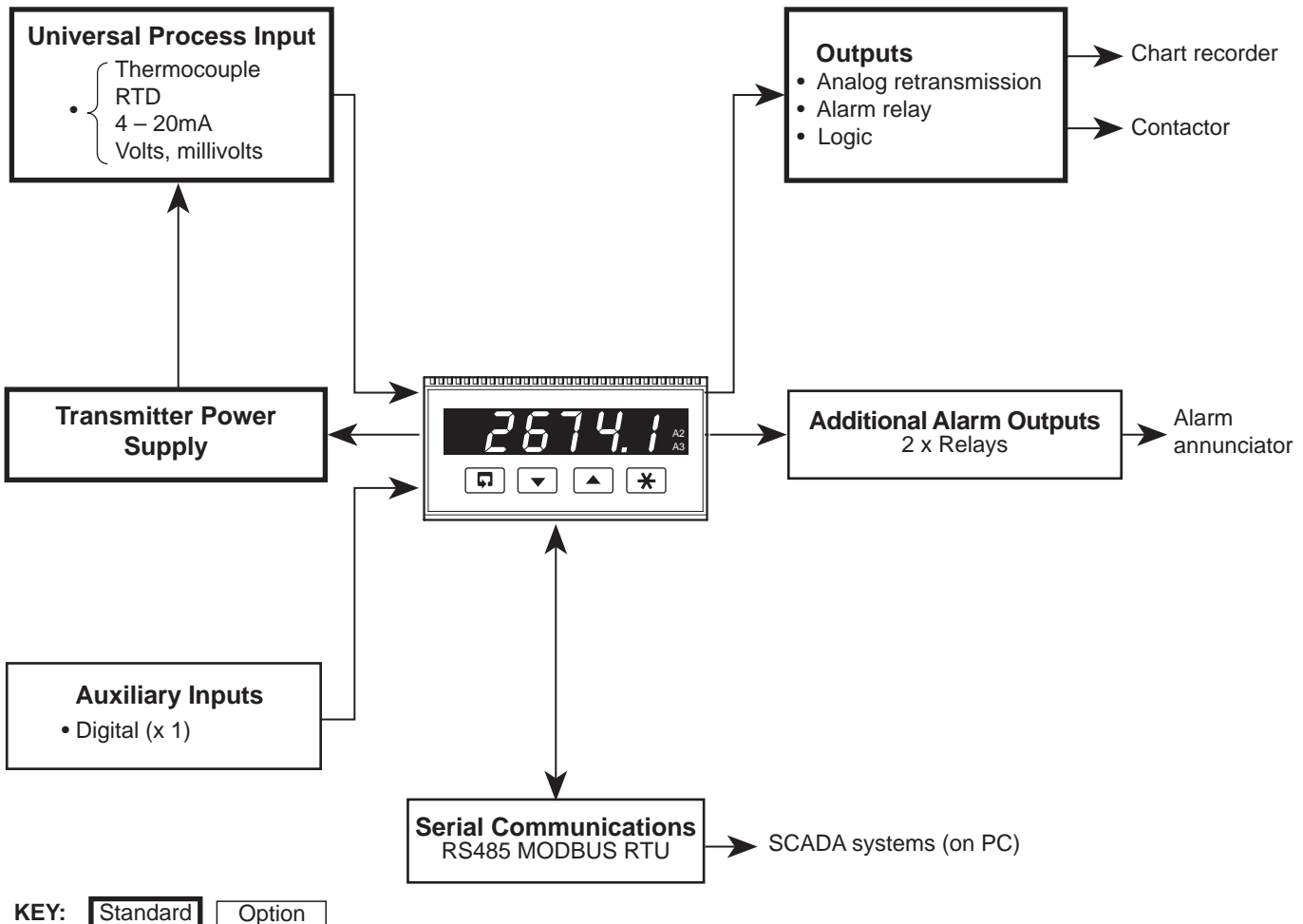
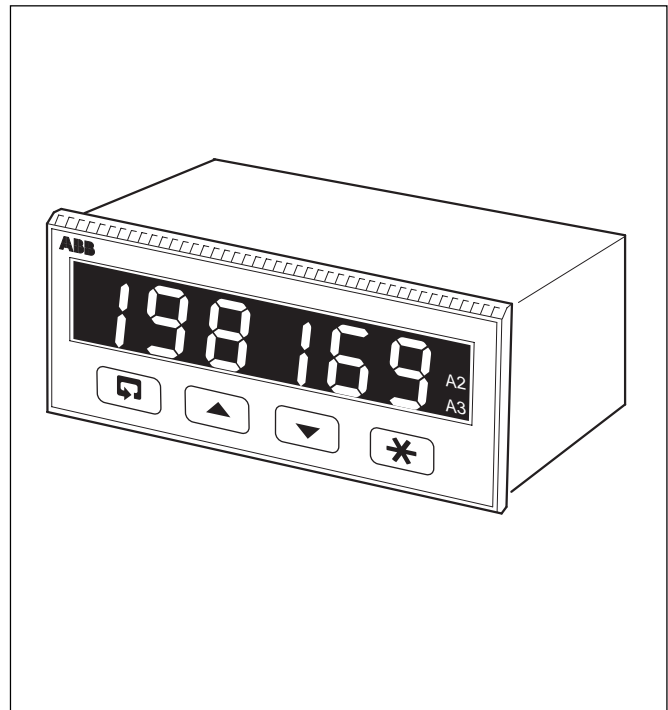
COMMANDER 150

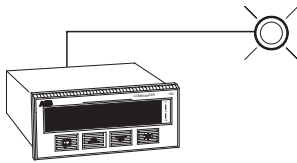
The COMMANDER 150 Universal Process Indicator is a highly versatile, **6-digit industrial display indicator**, with the capability to measure and indicate temperature, pressure, flow, level and other process variables.

The standard COMMANDER 150 provides a retransmission output and **alarm relay**. Further relay outputs and **RS485 communications** may be added to suit your applications.

The **configuration** of the COMMANDER 150 is simply achieved by moving the security switch and entering a 4-digit code from the front panel keys. No passwords, no input links, no complications.

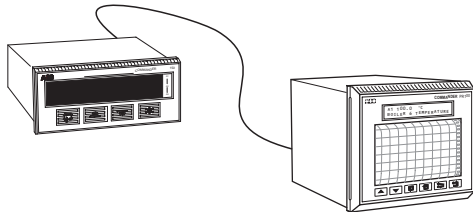
With **hoseproof front panel protection** as standard, and superior RF immunity, the COMMANDER 150 has been designed to provide reliable indication in the harshest environments.





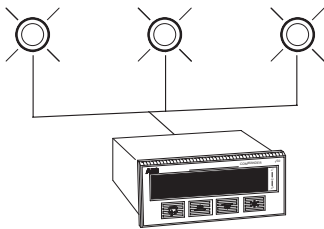
Display and Alarm

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



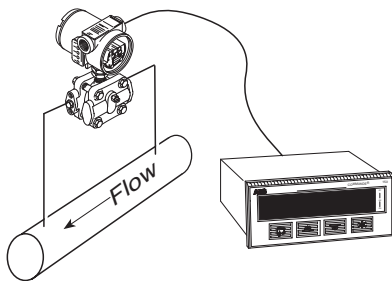
Retransmission

The COMMANDER 150 has, as standard, a 4 to 20mA output for retransmission of the process variable to a chart recorder or data logger.



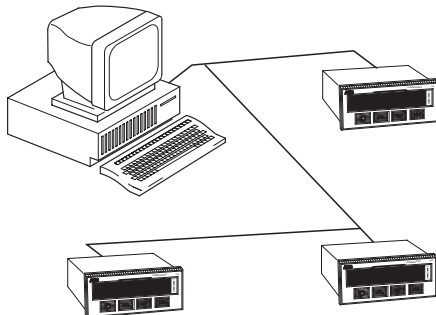
Multiple Alarm Option

Additional to the standard alarm relay up to two extra alarm relays can be fitted to indicate a range of alarm states.



Flow Totalization, 6 digits

A standard feature in the COMMANDER 150 is flow totalization. This will total any 4 – 20mA flow signal. With the built-in transmitter power supply and root extraction this makes the COMMANDER 150 ideal for use in simple Differential Pressure flow loops. 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 COMMANDER 150 can communicate with PLCs and SCADA using the MODBUS protocol.

Standard Analog Input Ranges

Thermocouple	Maximum Range °C	Maximum Range °F	Accuracy (% of reading) *
B	–18 to 1800	0 to 3270	0.1% or $\pm 2^{\circ}\text{C}$
E	–100 to 900	–140 to 1650	0.1% or $\pm 0.5^{\circ}\text{C}$
J	–100 to 900	–140 to 1650	0.1% or $\pm 0.5^{\circ}\text{C}$
K	–100 to 1300	–140 to 2350	0.1% or $\pm 0.5^{\circ}\text{C}$
N	–200 to 1300	–325 to 2350	0.1% or $\pm 0.5^{\circ}\text{C}$
R	–18 to 1700	0 to 3000	0.1% or $\pm 1.0^{\circ}\text{C}$
S	–18 to 1700	0 to 3000	0.1% or $\pm 1.0^{\circ}\text{C}$
T	–250 to 300	–400 to 550	0.1% or $\pm 0.5^{\circ}\text{C}$

RTD	Maximum Range °C	Maximum Range °F	Accuracy (% of reading)
PT100	–200 to 600	–325 to 1100	0.1% or $\pm 0.5^{\circ}\text{C}$

Linear Inputs	Range		Accuracy (% of reading)
Milliamps	0 to 20		0.2% or $\pm 2\mu\text{A}$
Milliamps	4 to 20		0.2% or $\pm 2\mu\text{A}$
Volts	0 to 5		0.1% or $\pm 200\mu\text{V}$
Volts	1 to 5		0.1% or $\pm 200\mu\text{V}$
Millivolts	0 to 50		0.1% or $\pm 20\mu\text{V}$

Square Root Input	Range		Accuracy (% of reading)
Milliamps	4 to 20		0.2% or $\pm 2\mu\text{A}$

Notes.

* Performance accuracy is not guaranteed below 300°C B, R & S thermocouples or low end sq. root ranges.

RTD, 3-wire platinum, 100 Ω per DIN 43760 standard (IEC751), with range of 0 to 400 Ω .

Min. span below zero Type T 70°C/126°F

Type N 105°C/189°F

THC standards DIN 43710 IEC 584

RTD standards DIN 43760 IEC 751

Electrical

Voltage

85 to 265V a.c. 50/60Hz
24V d.c. option)

Power consumption

< 6VA

Power interruption protection

< 60ms/< 3 cycles, no effect
> 60ms/>3 cycles, instrument returns to operation after a controlled reset

Environmental

Operating limits

0 to 55°C (32 to 131°F)
5 to 95% RH non-condensing

Temperature stability

< 0.02% of reading or 2 $\mu\text{V}/^{\circ}\text{C}$ (1 $\mu\text{V}/^{\circ}\text{F}$)

Front face

IP65 (NEMA3), case rear IP20

EMC

Emissions

Meets requirements of EN50081-2

Immunity

Meets requirements of EN50082-2

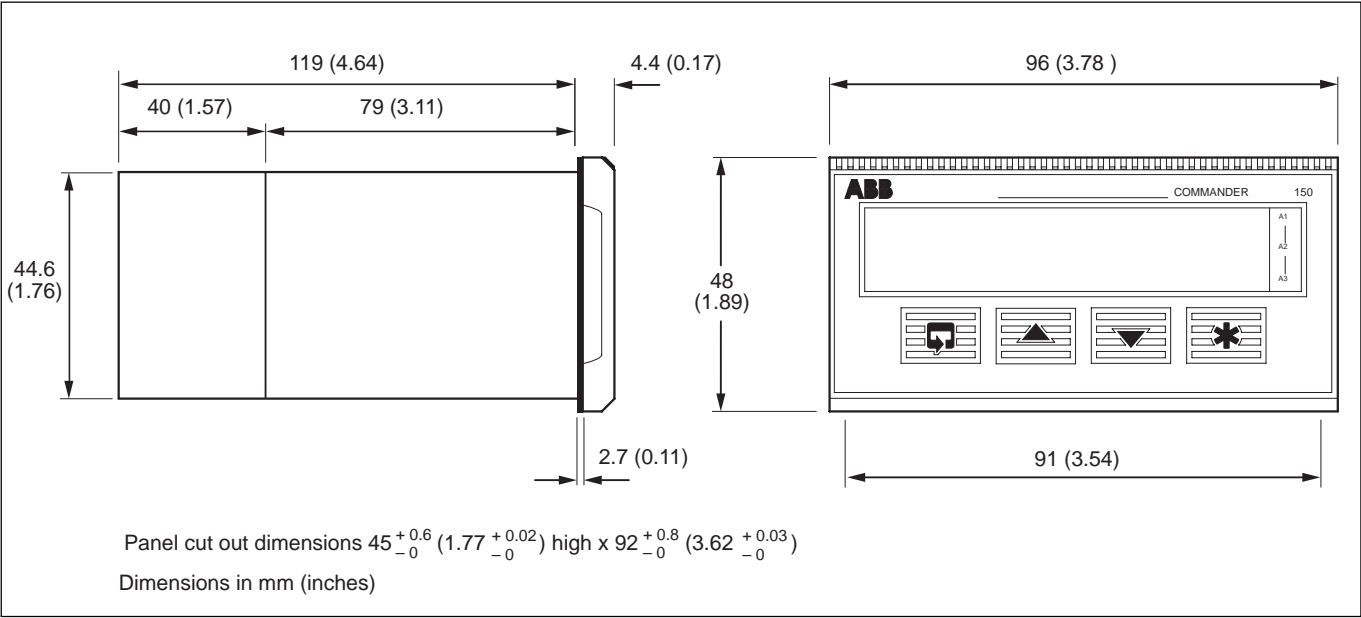
Design and manufacturing standards

Designed to meet CSA requirements
CE mark

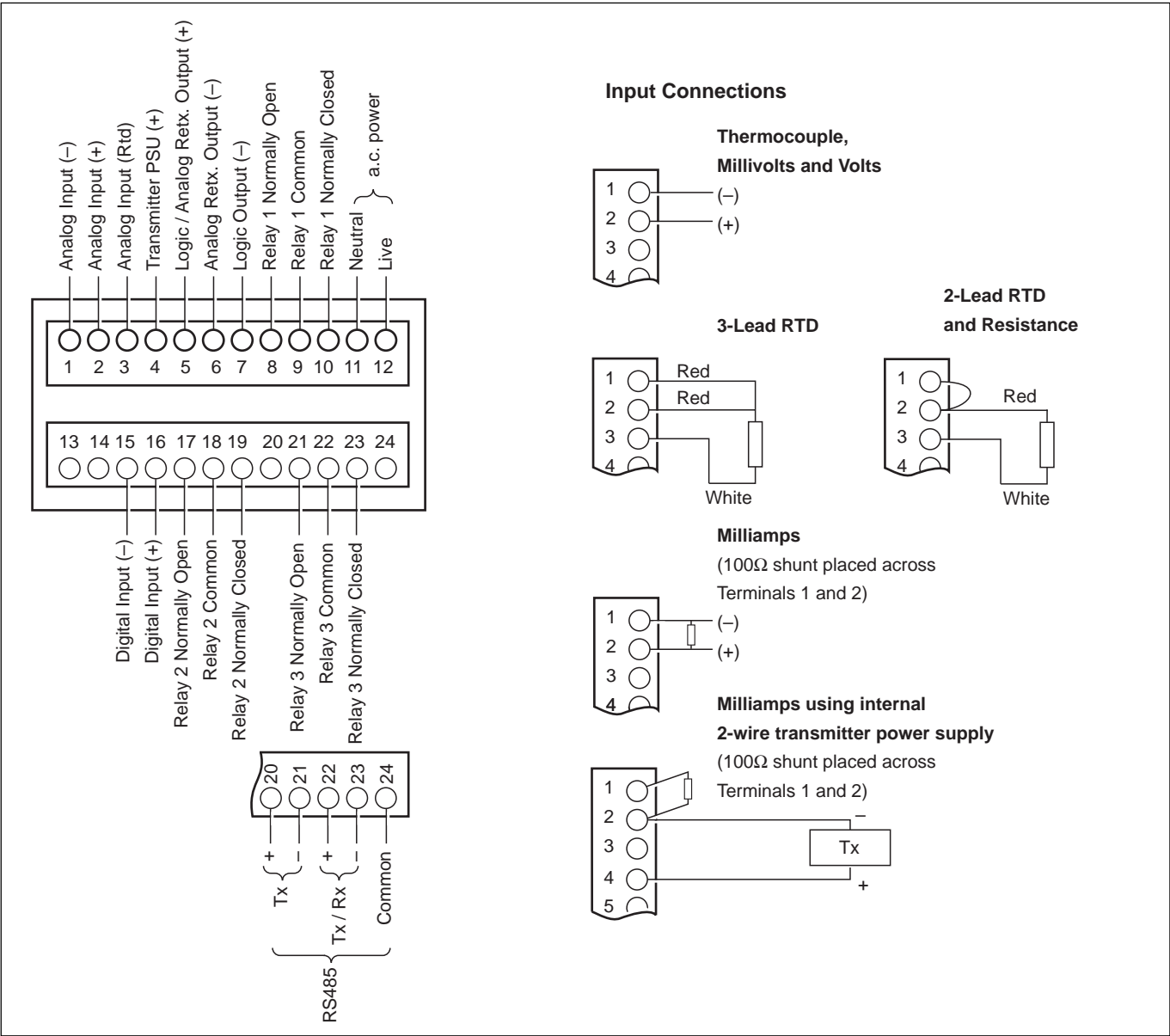
Electrical safety

EN61010 – 1

Dimensions



Wiring Connections



Ordering Guide

COMMANDER 150 Indicator		C150	/	X	X	X	X	/	X	X	X	X
Options	– None	0	0									
	– One additional relay	0	1									
	– Two additional relays + one digital input	0	2									
	– One additional relay + one digital input	0	3									
	+RS485/MODBUS											
Power Supply	85V to 265V a.c.					0						
	24V d.c.					1						
Build	Kent-Taylor Standard						0					
	CSA approval (pending)						1					
	UL approval						2					
Programming/Special Features	Configured to factory standard								S	T	D	
	Configured to customer detail								C	U	S	
	Agreed special features								S	P	X	X

Instrument Coding Example

	C150	/	00	0	0/	STD
COMMANDER 150 Universal Process Indicator						
No option board fitted						
85V to 265V a.c. power supply						
Standard build						
Configured to factory standard						



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