

# ABB C1901 Chart Recorder datasheet

<http://www.manuallib.com/abb/c1901-chart-recorder-datasheet.html>

The C1901 is a single pen, fully programmable circular chart recorder. The instruments straightforward operator controls and robust construction make it suitable for a variety of industrial environments.

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# C1901

## Single pen circular chart recorder

C1901 – a rugged, reliable recorder for all single channel recording applications



### Universal process input

- mA, mV, V, thermocouples and resistance

### Signal linearization

- full range of linearizers included as standard

### 6-digit indicator panel

- continuous display of process value

### NEMA 4X/IP66 construction

- hosedown protection

### Optional Totalizer function

- 8-digit flow totalizer

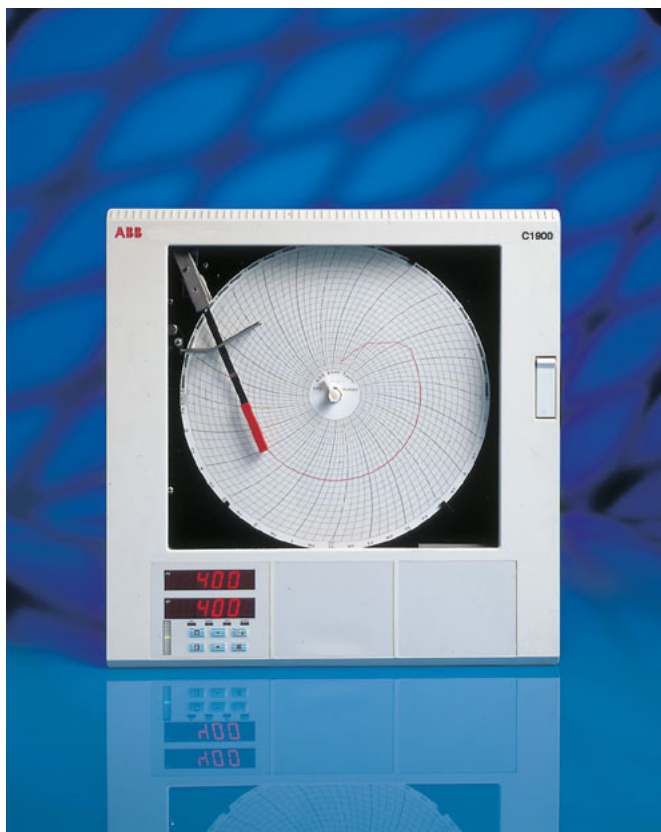
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Single pen circular chart recorder

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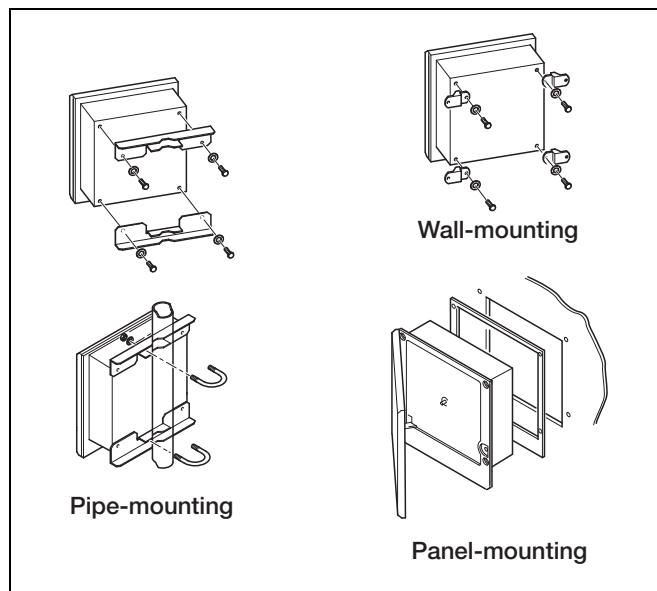
**Designed to survive**

NEMA 4X protection ensures the C1901 can survive in the harshest environments and makes the recorder ideal for use in panels which are regularly hosed down. The tough, acid-resistant case and secure cable-entry glands maintain the NEMA 4X rating for wall-mount or pipe-mount instruments.



**Easy to install**

A choice of mounting options enables simple installation of the recorder in a panel, on a wall or on a pipe. Mains isolation can be provided by an optional power switch within the instrument.



## C1901

Single pen circular chart recorder

### Specification

#### General

##### Construction

Size	15.23 in. (h) x 15.04 in. (w) x 5.57 in. (d) (386.8 x 128.0 x 141.5 mm)
Weight	18 lb (8.2 kg)
Case material	Glassfiber-filled reinforced polyester
Window material	Polycarbonate
Door latch	High-compression with optional lock

##### Environmental

Operational temperature range	32 to 130 °F (0 to 55 °C)
Operational humidity range	5 to 95 % RH (non-condensing) 5 to 80 % RH (chart only)
Case sealing	NEMA 4X (IP66)
Fast transients	IEC 801-4 Level 3

##### Installation

Mounting options	Panel, wall or pipe
Terminal type	Screw
Wire size (max)	14 AWG (I/O), 12 AWG (power)
Fast transients	IEC 801-4 Level 3

##### Operation and configuration

Programming method	Via front panel keys
Security	Password protected menus

##### Safety

General safety	IEC348
Isolation	2kV DC (channel/ground)
Memory protection	Nonvolatile FRAM

##### Approvals

CE	Panel, wall or pipe
CSA	(option)
CSA/FM Class 1 Div. 2	(option)
UL	(option)

##### Power supply

Voltage	100 to 240V AC $\pm$ 10 % (90V min. to 264V AC max.) 50 / 60Hz
Consumption	<30 VA
Line interruption	Up to 60 ms

##### Totalizer

Size	99,999,999 max.
Count direction	Up or down
Preset	User-programmable

#### Process input

##### General

Noise Rejection	Common mode >120dB at 50 / 60Hz Normal (series) mode >60dB at 50 / 60Hz
CJC rejection ratio	<0.05 °C / °C
Sensor break protection	Upscale or downscale drive
Out of range detection	0 to 100 % of engineering span
Temperature stability	<0.02 % of reading / °C or 1 $\mu$ V / °C
Long-term drift	<0.01 % of reading 10 $\mu$ V annually
Input impedance	>10 M $\Omega$ (mV and V inputs) 100 $\Omega$ (mA input)

##### Analog input

Signal types	mV, V, mA, $\Omega$
Thermocouple types	B, E, J, K, N, R, S, T
Resistance thermometer	Pt 100
Other linearizations	$x^{3/2}$ , $x^{5/2}$ , square root
Sample interval	250 ms
Digital filter	0 to 60s programmable

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#### Recording system

##### Pen

Color	Red
Response	7 seconds (full scale)
Resolution	0.1 % steps
Pen lift	Motor-driven, with optional auto-drop

##### Chart

Chart size	10 in. or 105 mm
Chart speed	7 seconds (full scale)1 to 167 hours or 7 to 32 days per revolution
Rotation accuracy	<0.5 % of rotation time

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#### Display and operator panels

##### Displays

Type	6-digit red LED, 0.56 in. (14 mm) high
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##### Panel keys

Function	Programming access, increment / decrement, pen lift and user-defined function key
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#### EMC

##### Emissions and immunity

Meets requirements of:	EN50081-2 EN50082-2 EN61326 for an industrial environment CE mark
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**C1901**

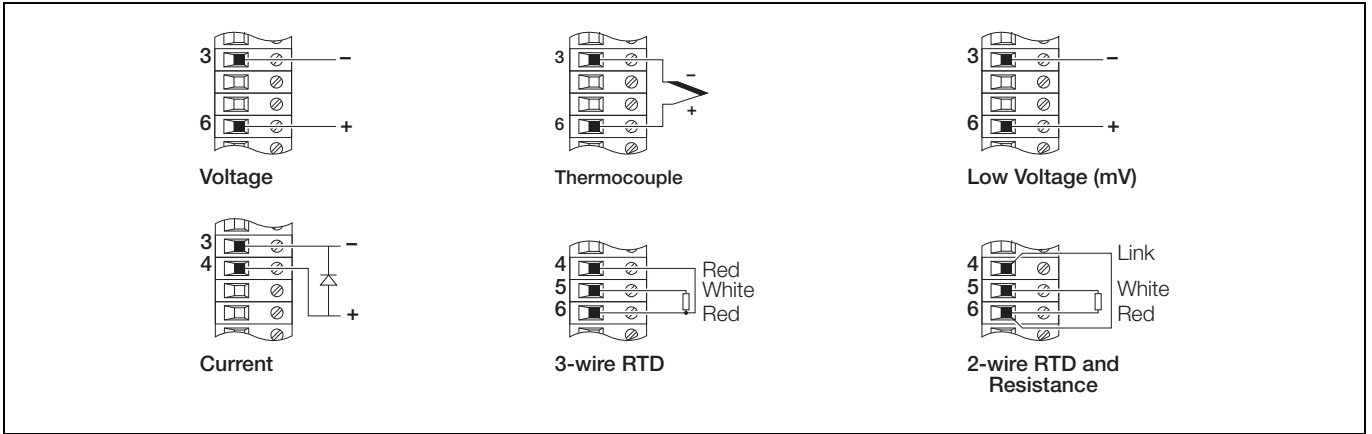
Single pen circular chart recorder

**Analog input performance**

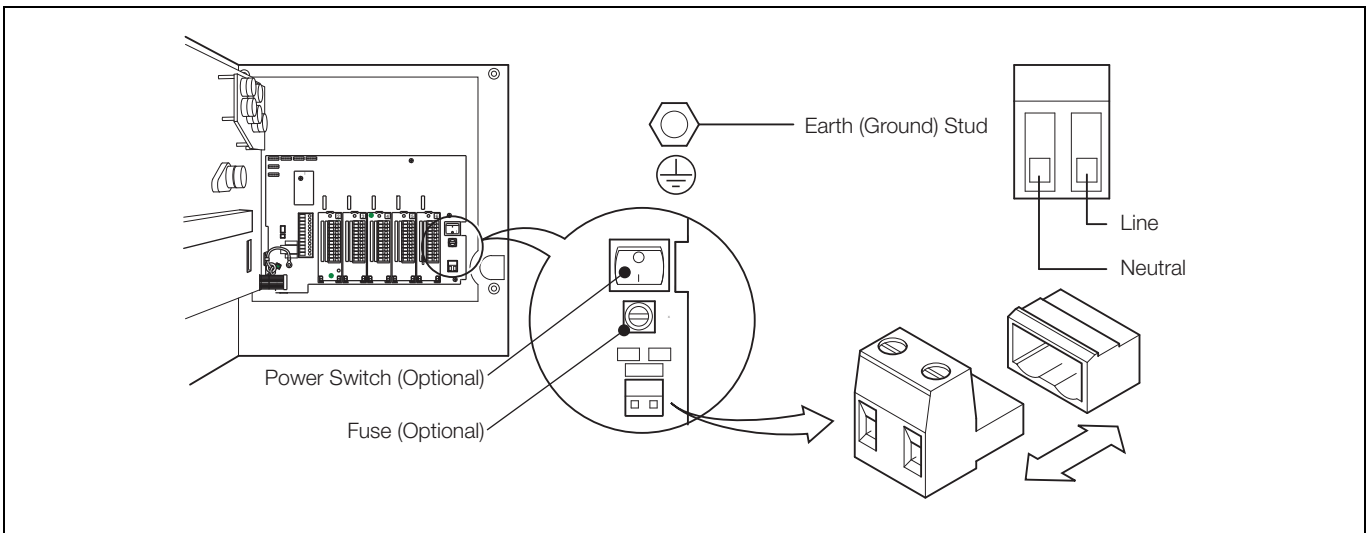
Type	Range Lo	Range Hi	Min. Span	Accuracy
mV	0	150	5	± 0.1 % reading or 10 µV
V	0	5	0.1	± 0.1 % reading or 20 mV
mA	0	50	1	± 0.2 % reading or 0.2 µA
Ω (low)	0	750	20	± 0.5 % reading or 10 Ω
Ω (high)	0	10 k	400	± 0.5 % reading or 0.1 Ω

Type	°C		°F		Accuracy (excl. CJC)
	Range Lo	Range Hi	Range Lo	Range Hi	
B	-18	1800	0	3270	± 2 °C (above 200 °C) (3.6 °F above 434 °F)
E	-100	900	-140	1650	± 0.5 °C (± 0.9 °F)
J	-100	900	-140	1650	± 0.5 °C (± 0.9 °F)
K	-100	1300	-140	2350	± 0.5 °C (± 0.9 °F)
N	-200	1300	-325	2350	± 0.5 °C (± 0.9 °F)
R	-18	1700	0	3000	± 1 °C (above 300 °C) (1.8 °F above 572 °F)
S	-18	1700	0	3000	± 1 °C (above 200 °C) 1.8 °F above 572 °F)
T	-250	300	-400	550	± 0.5 °C (± 0.9 °F)
PT100	-200	600	-325	1100	± 0.5 °C (± 0.9 °F)

**Wiring connections**



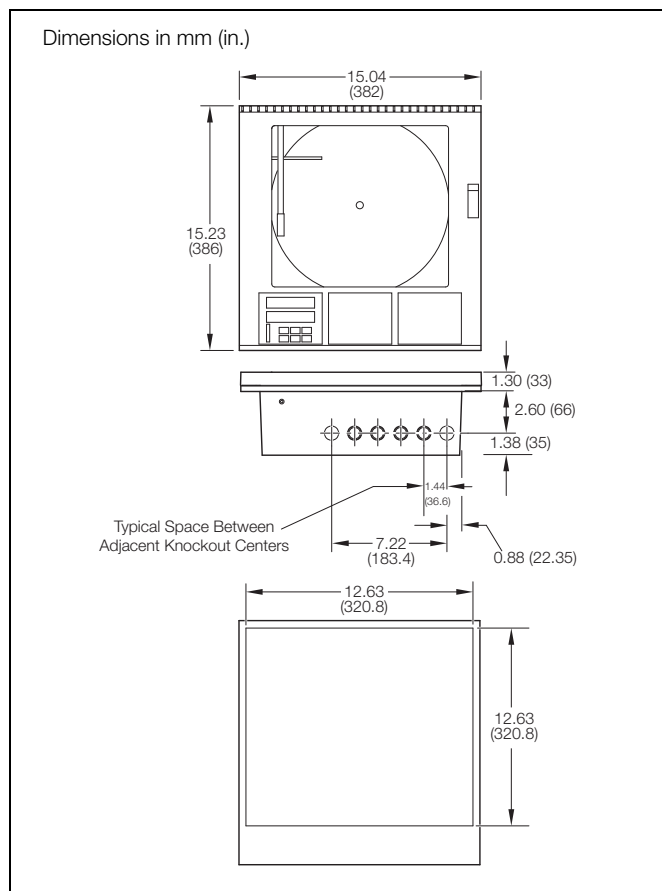
Standard input connections



Power supply connections

**C1901**  
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**Overall dimensions**



## C1901

Single pen circular chart recorder

### Ordering information

<b>C1901 single pen circular chart recorder</b>	1901	X	X	0	X	X	X	0	0	0	0	0	XXXX
<b>Chart type</b>													
Taylor (ER/C) charts		J											
KPC 105, Kent PX and Kent PXR type charts		K											
Chessell brand charts		C											
<b>Build</b>													
ABB standard		A											
CSA approved		B											
CSA/FM Class 1 Division 2 approved		F											
UL approved		U											
<b>Options</b>													
None					0								
Totalizer					3								
<b>Door lock</b>													
Not fitted						1							
Fitted						2							
<b>Power supply</b>													
115V AC							1						
230V AC							2						
115V AC with on/off switch							4						
230V AC with on/off switch							5						
<b>Programming / Special features</b>													
Configured to factory standard													STD
Configured to customer requirements (customer to complete and supply C1901 custom configuration sheet – <a href="#">INF08/031</a> )													CUS
Special features													SXX
Engineered configuration (customer to supply configuration details required)													ENG

### Accessories

ENG/REC After-sales engineered configuration service



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[www.abb.com/recorders](http://www.abb.com/recorders)

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