

The SPECTRUM series analog clock operates on a wide range of wired clock system types. From historical 3-wire synchronous systems to 2-wire midnight resets to 2-wire On-Demand reset systems, from 24V to 120V -- the SPECTRUM Series has it covered. The energy efficient design uses less power than previous systems allowing longer wire distances with less power supplies. An on-board microprocessor monitors the hand position to ensure accurate time display and does not require any user intervention to re-calibrate the hand location like clocks by others.

**3-Wire Synchronous Operation.** This microprocessor based time piece can automatically discern the reset protocol transmitted from the master clock (by National Time or others) and synchronize with the existing clocks on the system. Reset schemes from popular manufacturers such as IBM, Simplex, Lathem, Rauland, Cincinnati, Honeywell, Standard Electric Time, Faraday, Stromberg, and others are supported. Refer to the compatibility list in bulletin C-430 for details. When used with master clock by others, the SPECTRUM series clock can coexist with the existing clocks and operate similarly. However with a National Time master clock, the clocks can coexist on the same circuit but the SPECTRUM clocks can reset immediately after a power outage without the 12 hour reset cycle required by historical clocks using National's exclusive On-Demand reset transmission on the existing motor wiring. This provides a means to upgrade your clock system to a higher level of operation incrementally as older clocks fail or funds become available.

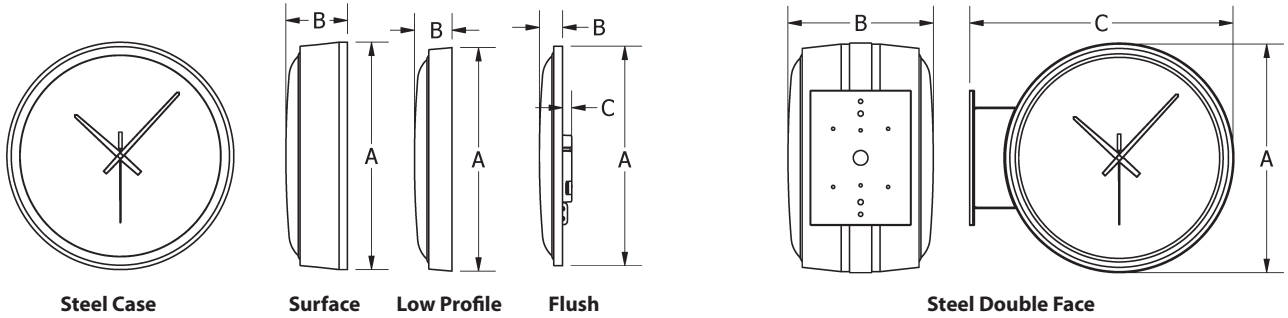
**2-Wire Operation.** With a master clock by others, a simple 0.25 second pulse at midnight can synchronize the clocks. With a National Time master clock, the On-Demand reset protocol transmits power and time information using two wires to send the clocks to the correct time at any time. This eliminates the waiting period for errant clocks following a power interruption.

Each clock is equipped with an all metal case and white polystyrene dial having black markings and hands. A sway-proof hanger plate is furnished that securely holds clock to wall. Cases are attractively finished in Powder Gray enamel. Other finishes and glass or shatterproof lens are available upon request. A 12" round case with a glass crystal is also available. Refer to Bulletin C-323 for classic dial series.



## Benefits:

- Easily synchronize to existing clocks
- Low current consumption saves energy, reduces power supply requirements and allows longer wire distances
- Microprocessor controlled hand position for unsurpassed accuracy
- Instant correction reduces down time and occupant confusion
- Long, wide hands increase visibility over competition
- Made in USA



Dial Size	A	B	C
10" Round Steel-Surface	11.65"	3.25"	-
10" Round Steel-Flush	11.13"	1.38"	0.55"
12" Round Steel-Surface	13.00"	3.25"	-
12" Round Steel-Low Profile	14.20"	2.00"	-
12" Round Steel-Flush	13.00"	1.38"	0.55"
12" Round Plastic-Low Profile	14.00"	2.13"	-
12" Square Steel-Surface	12.50"	2.75"	14.50"
16" Round Steel-Surface	16.98"	4.75"	-
16" Round Steel-Flush	16.50"	1.38"	0.55"

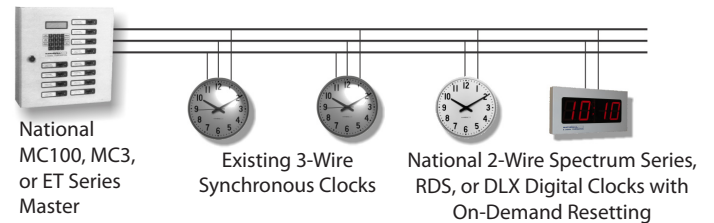
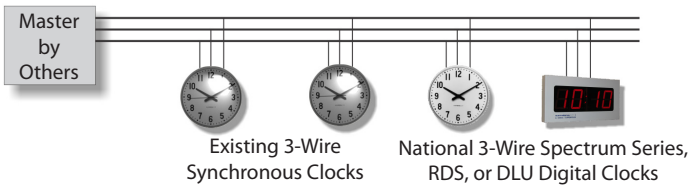
Dial Size	A	B	C
10" Round Steel-Double Face	11.65"	8.63"	14.00"
12" Round Steel-Double Face	13.00"	8.63"	16.00"
16" Round Steel-Double Face	14.20"	8.63"	19.00"
12" Square Steel-Double Face	12.50"	8.63"	14.50"

Clock Type	Run	Reset
2-Wire 120VAC	15mA	n/a
3-Wire 120VAC	15mA	1mA
2-Wire 24VAC	20mA	n/a
2-Wire 24VDC	9mA	n/a
3-Wire 24VAC	20mA	1mA

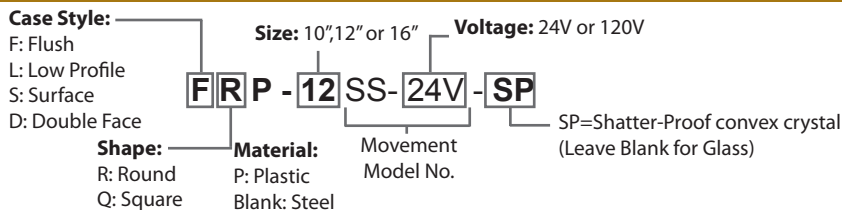
Refer to Bulletin C-577 for clock mounting options.

## Typical System Layouts

### Existing Systems



## Ordering Information



### Optional Accessories:

Part No.	Description
143	Flush Back box for all sizes. Ordered Separately
12WGS	Wire Guard for 10" and 12" Round Clocks
15WGS	Wire Guard for 12" square and 16" Round Clocks
FR-12ADAPT-ST	Flush Round 12" Single-Tang Adapter
LR-12ADAPT-ST	Low Profile 12" Single-Tang Adapter
LR-12ADAPT-SM	Low Profile 12" Screw-Mount Adapter

See Bulletin C-328 for Clock Speaker Assemblies

### Popular Part number examples:

Model Number	Description
LR-12SS-120V-SP	12" Low Profile Round Steel; 120V SPECTRUM Series Universal or On-Demand Reset Clock; Shatter-proof
FR-12SS-120V-SP	12" Flush Round Steel; 120V SPECTRUM Series Universal or On-Demand Reset Clock; Shatter-proof
SR-16SS-24V	16" Surface Round Steel; 24V SPECTRUM Series Universal or On-Demand Reset Clock; Glass crystal