

# SmartLink™ MONITORING AND CONTROL DEVICES

## Solutions for Distribution Feeder Automation Applications

Series 2700 Cellular Communication Based Monitor and Control Units combined with Fisher Pierce's SmartLink Utility Application Interface provides a breakthrough, cost effective system for distribution automation applications.

Utilizing the existing cellular and public switched telephone network infrastructures (PSTN), the 2700 Series monitor and control units target distribution feeder automation applications requiring constant monitoring for alarm, maintenance, status reporting and switch control.

All Series 2700 monitor and control units provide two-way communications with optional monitoring and control features.

**Monitoring Options:** Up to 5 status inputs, 4 radio faulted circuit indicator monitoring points.

**Control Options:** Two, dry or 120Vac wetted, momentary control relays.

The SmartLink System provides immediate, cost efficient solutions for:

- New distribution automation users
- Expansion of system coverage
- New monitoring applications

### SmartLink Applications

- Fault monitoring
- Sectionalizing switch monitoring
- Motor operated switch control
- Capacitor switch control
- Alarm reporting
- Equipment maintenance reporting

### Specifications

#### Electrical

**Operating Voltage Range:** 105 - 135 Vac, 60Hz

**Surge Withstand:** ANSI C62.41 - 1987

**Electrostatic Discharge Test:** IEC 801-2, 15 kV

**Power Consumption:** Less than 5 watts

**FCC:** Compliant

#### Output Relay (switch control):

Number: Two

Type: Momentary closure  
Normally open

Maximum load: 10 amps



Solar Powered Unit



Maximum Inrush: 120Vac, 60Hz, 50A, 50% PF,  
6 Cycles, Make Only

Contact closure period: 1 - 255 seconds,  
in 1 sec increments

Option 1: Two 120Vac NO switched contacts  
Option 2: Two SPST, NO isolated contact sets

#### Fuse Rating:

Controller power/output to switch: 10A FNM Slo-Blo  
Battery circuit: 3A

#### Status Monitoring/Control:

**Status Inputs:** 5 opto-isolated inputs mutually isolated from each other, line and neutral (customer wetted 40V - 140V ac or dc)  
or 2 dry contact inputs, internally wetted with 12Vdc, 2.5ma with common terminal, isolated from line, neutral, chassis

**Status Outputs:** 2 status outputs (solid state and isolated from each other, line and neutral)  
or 2 relay outputs as described in the Output Relay section above

#### Communications:

RS232 Communications port: DB9 female connector

Optical Communications port option: Type 2

Cellemetry Transceiver Module:

Frequency: Transmit 834.390 - 835.620MHz

Receive: 879.390 - 880.620MHz

#### Fault Indicator Receiver (Cap control N/A):

Operating Frequency: 312MHz

Receiver Range: 100 feet typical

(used with model 1548 FCI)

Certification: Complies with FCC Part 15 emissions

#### Environmental

**Ambient Temperature range:** -30° C to +55° C (outside)

**Humidity Range:** 0 to 95% (non-condensing)

#### Measurement Performance

##### Voltage, True RMS

Secondary

Resolution: 0.2 Vac

Accuracy: +/- 0.8% of reading

# Specifications

## Mechanical

**Enclosure:** NEMA 3R, Lexan or Aluminum

**Security:** Latch suitable for meter seal and padlock

**Mounting:** 4 or 6 stab meter base (Lexan or aluminum)  
Wall or Pole bracket (Aluminum)

### LED Indicators:

- Red** - Processor OK
- Red** - Cellular communications present indicator
- Red** - Close
- Green** - Trip (open)
- Red** - Faulted circuit indicator (FCI)

**Panel Switches:** For remote/local and manual switch operation

**External Antenna:** Top Mounted Cellular antenna and FCI antenna

**Dimensions:** 8.5" h x 6.5" w x 4.75" d (Lexan)  
11.5" h x 7.0" w x 4.0" d (Aluminum)

**Weight:** 5 lbs nominal  
11 lbs solar powered

**Battery:** Standard: Nickel cadmium rechargeable 10.8Vdc  
Solar: Solid lead acid 12V, 2.5Ah

## Ordering Information

To order a series 2700 Control, specify code letter or number of each of the following.  
Not all combinations are available, consult factory.

**Example of 2721L-SJ-FV-B-NN-NNN-X: 27 2 1 L - FJ - FR - B - NN - NNN - A**

| Code | Basic Model Number |
|------|--------------------|
| 27   | Base Model         |

| Code | Cell Modem Type |
|------|-----------------|
| 2    | Cell Modem      |

| Code | Line Voltage  |
|------|---------------|
| 1    | 120 Vac 60 Hz |
| 5    | Solar Powered |

| Code | Enclosure Type |
|------|----------------|
| A    | Aluminum       |
| L    | Lexan          |

| Code | Meter Socket Wiring                 |
|------|-------------------------------------|
| FJ   | Four Blade Lexan/Aluminum           |
| BJ   | Pole Mount Aluminum                 |
| WJ   | Wall Mount Aluminum                 |
| SL   | Six Blade Lexan/Aluminum            |
| FM   | Flush Mount/Lexan                   |
| SY   | Six Blade Lexan/Aluminum            |
| ST   | Six Blade Lexan/Aluminum            |
| RC*  | Radio control cover assembly (4400) |

\*Consult factory for availability

### Factory Code

| Code | Additional Options                           |
|------|--|
| GNC  | Ground lug and capacitor neutral current     |
| NNC  | Capacitor neutral current                    |
| GN3  | Ground lug and 3 single phase capacitor cur. |
| NN3  | 3 single phase capacitor current             |
| NNG  | Ground lug                                   |
| NNN  | NONE   |

| Code | External MS Connector Input/Output  |
|------|---|
| SW   | 3 Status in (wetted)/2 status in dry, (alum. encl. 10 pin MS conn.)                 |
| SP   | 5 Wetted status inputs (cust. wetted) (alum. encl., 10 pin MS conn.)                |
| SD   | Two status dry contact inputs (internally wetted) (alum encl., 5 pin MS conn.)      |
| SN   | Four wetted status inputs (cust. wetted) (solar only) (alum. encl., 8 pin MS conn.) |
| NN   | None  |

| Code | Battery Backup  |
|------|---|
| B    | Required on fault monitor (FN, FR, FH) and solar models (FS) in section 6 |
| N    | None  |

| Code | Function   |
|------|--|
| SC   | Switch Control with 2 dry isolated relay outputs   |
| FN   | Fault (FCI) Monitor  |
| VN   | Capacitor Control with either Radio as Primary Mode with Voltage Override or Voltage as Primary Mode with Radio Override (sec. 8 NN only, Sec. 5 SY, ST N/A) |
| FR   | Fault (FCI) monitor with 2 dry isolated control relay outputs (sec. 5, FJ N/A, Sec. 8, SN N/A)   |
| FH   | Fault monitor with two 120Vac NO switched contacts (sec. 5, FJ N/A, Sec. 8, SN N/A)  |
| *FS  | Solar Fault monitor (sec. 8, SN, NN only, sec. 5 WJ, BJ only)  |
| **NN | 4400 Radio override door mounted module  |
| VM   | Voltage monitoring (no switch control or fault monitoring capability) Select Code N on Section 7, Code NN on Section 8                                       |

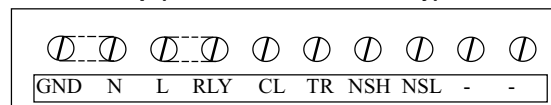
\*Consult factory for availability

\*\*Order At2613-4400 pcb and an RS232 cable for door mounting

### Flat wall or Wrap-Around Pole Bracket Mounting with Terminal Strip

| Section 5 | Wiring                        |
|-----------|-------------------------------|
| BJ<br>WJ  | Terminal Strip as shown below |

### Terminal Strip (Aluminum Enclosure Only)



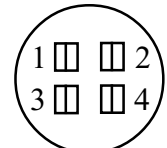
Broken lines between terminals indicate removable jumper

### Four Stab Meter Socket Mounting and Wiring

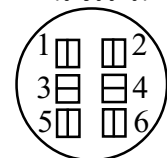
| Section 5 | 1 | 2       | 3  | 4  | 5 | 6 |
|-----------|---|---------|----|----|---|---|
| FJ        | L | NEUTRAL | TR | CL | - | - |

### Six Stab Meter Socket Mounting and Wiring

| Section 5 | 1  | 2       | 3   | 4   | 5  | 6  |
|-----------|----|---------|-----|-----|----|----|
| SL        | L  | NEUTRAL | NSL | NSH | TR | CL |
| SY        | TR | NEUTRAL | L   | TR  | CL | CL |
| ST        | L  | NEUTRAL | TR  | CL  | TR | CL |



View looking into socket



Specifications are subject to change.



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