OTEK'S SOLUTION FOR YOUR I&C DIGITIZATION NIGHTMARE!?

FROM THIS

TO THIS



~10 YEARS TO OPERATE

OR THIS

OR THIS?



IN JUST ONE OUTAGE

Ideal for SMR (Small Modular Reactors) and Naval vessels

MEET MODULAR I&C DIGITAL CABINET AT ANS CONFERENCE & EXHIBIT-CHICAGO JUNE 2025

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DIGITIZE YOUR I&C IN ONE OUTAGE

All done in one (1) outage as suggested by EPRI MTA 3002020578 and INL MTA 3002020579 the financial benefits of digitization all done within your existing I&C room in only 200 sqft for two operators and two identical and independent panels with individual digital meters/controllers/current loop transmitters (PLCT) and touchscreen and SCADA compatible. You can add operator's control on the 3' deep x 6' wide (18 Ft²) surface just like on the Titan STA missile silo and incase of a Crowdstrike!

How did we do it?

- 1. Followed EPRI independent evaluation of our three technologies: **UPM**, **NTM**, and **PNP** and published their MTA 3002020578 with suggestions to convert **ALL** existing signals in the I&C to 4-20mA current loop and **ALL** the meters to powerless™ (current loop powered). This suggestion eliminates duplicate meters in inventory allowing you to use any meter for any location. We call it **"One for All" (One transmitter for all inputs)**
- 2. Since all existing signals have specific signal input type and range, EPRI suggested to convert them all to 4-20mA current loop at the distribution panel (or cabinet), hence we call it the "All For One" (all inputs for one output 4-20mA C.L.)
- 3. Since we designed the **PNP** series with ultra bright organic white LED digits or automatic programmable tricolor LEDs on our **NTM** and **UPM** series and you can "stick" the colored "scale plate" on the front (instead of behind the filter) you can use any color, text, scale language, and meter identification code consisting of 3 (or more) alphanumeric code of over 60,000 unique IDs.
- 4. The 4-20mA C.L. transmitters offered are actually PLCT (Programmable Logic Controller & Transmitter) with dual display meters to which we plug-in our 1" square module to convert it from a meter to transmitter. Again in emergency or at high seas or under it, you can convert any meter to transmitter or vice verse and any meter for any original signal regardless or input range. The result is, all you need is **two (2)** instruments from OTEK: the meter and the transmitter especially if you convert all of the different 500+ meters you presently have to OTEK's "Flat Pack" popular series either PNP-F (2" x 3" x 0.7"), PNP-E (1.5" x 1.5" x 0.7"), NTM-F or UPM-F, all 100% Mil-Spec and Class 1E with optional USB I/O to connect directly to your SCADA, DCS, or PLC or use the same 4-20mA C.L. that powers the meter for you to control the entire process. See our DI&C cabinet on the other side.
- 5. **The Economics:** Mr. Robert England (formally with **INL**) wrote the economical reasons to digitize your I&C (or naval ship) and published EPRI MTA 3002020579 to complement EPRI's MTA # 3002020578, where he and associates concluded that digitization could increase efficiency of your NPP by 5-8% and save millions of dollars in reduced analog meter and repair spares inventory and personnel.

What is a **PLCT**?A <u>P</u>rogrammable <u>L</u>ogic <u>C</u>ontroller and 4-20mA current loop <u>T</u>ransmitter! What does it do? It displays any input signal value on top display and its a 4-20mA output signal on its bottom display. It automatically controls your process via ON/OFF **SPDT** relays/MOSFET for High-High, Hi, Low-Low, Low programmable alarms including "fail safe" and also **PID** and our patented KIS/PID (<u>keep it simply</u>), empirically adjustable or programmable (<u>P</u>roportional <u>I</u>ntegral <u>D</u>erivative). No PhD required! See scope images. The **PLCT** is available to mil-specs, Class1E and custom in 1/8 DIN for panel or DIN rail mount and explosion proof pipe/wall mount. The PLCT offers optional RS485, Ethernet, and USB or custom serial I/O. For our armed forces: it has automatic or manual intensity control and display blinking when alarm (set point) is exceeded.





PNP CATALOG







