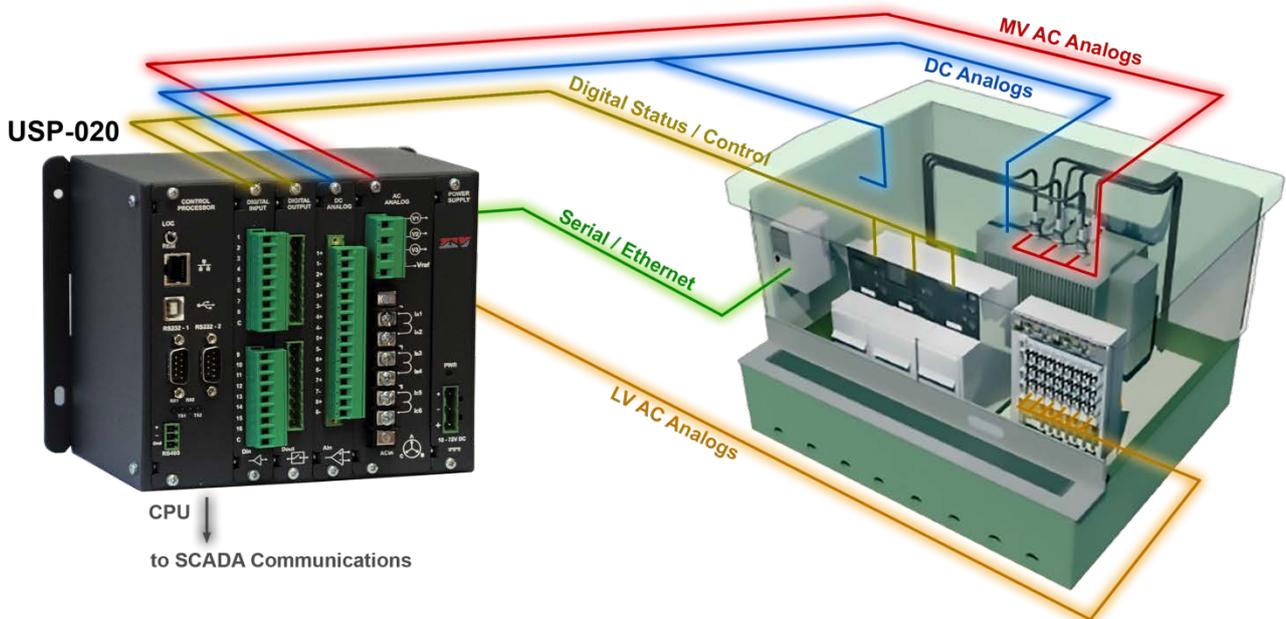# USP-020

Universal Smart Platform

USP-020

CPU ↓

to SCADA Communications

Telecontrol, FPD, MV and LV supervision in a modular device

The USP remote controller is an advanced multipurpose RTU ideally suited to Distribution Automation.

Its modular design facilitates the automation of different MV facilities: modern compact RMU, overhead interrupters & reclosers. It offers a cost-effective solution for extensible MV/LV switchgear applications and LV feeder monitoring.

In addition to standard protocols and features, it supports a larger number of inputs / outputs.

Modular Chassis. 5 & 8 slots models

It supports a range of configurable I/O modules, including 16 digital input modules, 8 digital output modules & AC analog input channel modules. Plus 8 channel DC analogue inputs (optional).

The AC analog channel module requires 2 slots.

All modules are certified to power utility standards.

Programmable Logic & Automation

The USP unit can define internal signals through its programmable logic from both the digital inputs and internal states, and forward them to LEDs and digital outputs.

Remote units can also manage and control up to 3 switches / sectionalizers of a compact SF6 RMUs.

A 3LxP configuration is the largest application case.

Remote control Protocols & Security

The USP can communicate with a control center or SCADA system using different protocols: IEC 60870-5-104/101/103, DNP3 or Modbus over TCP/IP.

All the remote operations are transmitted over secure transport protocols like HTTPS or SSH. Authentication access over LDAP and TACACS+ protocols is supported.

Other functions such as remote firmware update and configuration through web server or web services are included.

Technical Information

Analog Inputs (per each AC input module)	
Channels	3 CC + 3 VC
Accuracy	±0.25 %
Current Range	1 A_{nom}
Voltage Range	175 V_{AC} nominal (420 V_{AC} max)
F_{nom}	50/60 Hz ± 5%

Digital Inputs & Outputs	
Channels	16 DI, 8 DO per module
V_{nom} for digital inputs	48 V_{DC}
Switching Current for DO	5A @ 250 V_{AC} 2A @ 48 V_{DC}

Event Record Capacity	4000 events max

Communication Interfaces	
Ethernet	1 x 10/100 Base-Tx (RJ-45)
Serial Ports	2 x RS-232 (9 way D-type DTE) plus 1 x 2 wire RS-485
Extended module	Option available for additional Ethernet and Serial Ports

Remote control Protocols	IEC 60870-5-104/101/103, DNP3 & Modbus

Certification	IEC 60870-5-104 KEMA certified

Electromagnetic Immunity	
IEC 60255-5 IEC 60255-22-1 EN 55022 IEC 61000-4-2 IEC 61000-4-3 IEC 61000-4-4 IEC 61000-4-5	IEC 61000-4-6 IEC 61000-4-8 IEC 61000-4-9 IEC 61000-4-10 IEC 61000-4-16 IEC 61000-4-17 IEC 61000-4-18

Environmental Conditions	
Operating temperature	-20ºC to +60ºC
Storage temperature	-40ºC to +85ºC
Humidity	0 to 95 % (non-condensing)
Vibrations	IEC 60068-2-6 & IEC 60255-21-1 Class 2
Drop & Shock	IEC 60068-2-31

Power Supply	18-72 V_{DC} @ < 4W typ.

Dimensions	
5 slots model	168 x 146 x 116 mm
8 slots model	228 x 146 x 116 mm

Mounting	DIN rail / Panel

ZIV Automation Headquarters
Parque Tecnológico de Bizkaia, 210 - 48170 Zamudio, Spain. Tel.: +34 944 522 003   Fax.: +34 944 522 140.   E-MAIL: ziv@zivautomation.com
Please visit our website for local information in your area   **www.zivautomation.com**