



# Peripheral Unit for remote control and surveillance of secondary substation in medium voltage networks.

## UP DX1215 rev. 7

The UP devices, installed in secondary substations of medium voltage distribution networks, are intended to:

- ✓ Monitor the operation of the medium voltage networks (detect switchgear status and fault signals, acquire field measurement);
- ✓ Remotely control the secondary substations switchgears;
- ✓ Implement automatic procedures for the selection of the faulty branch.

The UP device is composed of:

- ✓ Elaboration Unit (UE) device, standard version (UE8) or extended (UE16)
- ✓ Power supply and battery charger (PSBC) device
- ✓ Cabinet and wiring

The cabinet contains the UE, PSBC, two 12Vdc batteries in series and the terminals, compliant to DV25/1 specification, to connect the modem.

## UE Elaboration unit

The UE device is the hearth of the UP since it hosts the monitoring and remote control logics of the secondary substation.

UE can record the substation temperature using a 2 or 4-wires temperature sensor.

The UE is suitable for mounting on 19" standard rack and can be provided in two versions:

- ✓ UE8 or Standard version, 4U high
- ✓ UE16 or Extended version, 7U high

## Communication Protocols

IEC 60870-5-101 via RS232 port

IEC 60870-5-104 via Ethernet or RS232 port

## PSBC

The PSBC charges the batteries that supply power to the components installed in the secondary substation (UE, RGDAT/RGDM, switchgears) and supply +12Vdc to the DCE.

The PSBC is suitable for mounting onto 19" standard rack and is 3U high.





# Technical Specifications

WORKING FEATURES	UE8	UE16
Remote signals	49	89
Remote commands	16	32
Remote measures	9	17
Digital Outputs	8	16
<b>POWER SUPPLY</b>		
Input Voltage	230 Vac +15/-20% @50-60 Hz 110 Vac +15/-20% @50-60 Hz	
Output Voltage	24Vcc (23÷28 Vcc) ± 1% 12Vcc ± 10%	
<b>REMOTE SIGNAL INPUTS</b>		
Inputs power supply voltage	24 Vcc (max 2.7 mA)	
Scan period	5 ms	
<b>ANALOG INPUTS</b>		
Inputs currents	4÷20 mA, ± 5mA	
A/D conversion accuracy	≤1%	
Scan period	1 s	
<b>REMOTE COMMANDS</b>		
Output type	24V polarized contacts, N.O. (Normally Open)	
Rated Voltage	±24Vcc	
Overcurrent	5 A	
Maximum load impedance	2 kΩ	
<b>EMC</b>		
ESD	CEI EN 61000-4-2:2011 Level 3, 6 kV contact, 8 kV air	
EMC	CEI EN 61000-4-3:2006+A2:2010, level 3, 10 V/m CEI EN 61000-4-4:2012, level 3, 1kV@5kHz (local conn.) level 4, 2kV@5kHz (field conn.) CEI EN 61000-4-6:2009, level 3, 10 Vrms CEI EN 61000-4-8:2010, level 5, 100 A/m for 1min, 1000A/m for 1s CEI EN 61000-4-10:1997+A1:2001, level 4, 30 A/m CEI EN 61000-4-12:2007, level 3, 2 kV CM, 1 kV DM CEI EN 61000-4-18:2007+A1:2011, level 2, 1 kV CM , 0.5 kV DM CEI EN 61000-4-16:1999+A2:2011, level 3 CEI EN 61000-4-5:2007, 2 kV Line-to-earth, 1 kV Line-to-line CEI EN 61000-4-29:2001 CEI EN 55011:2009+A1:2010, Group 1, Class A	
<b>COMMUNICATION</b>		
Communication network type	IP, GSM, GPRS	
Protocols	IEC 60870-5-104, IEC 60870-5-101	
Interfaces	IEEE 802.3 100BaseTX, D-SUB25 RS 232	
<b>ENVIRONMENTAL CONDITIONS</b>		
Operating temperature	-10 ÷ +65°C	
Storage temperature	-25 ÷ +70°C	
Maximum relative humidity	93% @ 40°C	
<b>CONFIGURATION</b>		
Local (via dedicated software)	USB 2.0, IP	
Remote (via dedicated software)	GSM, IP	