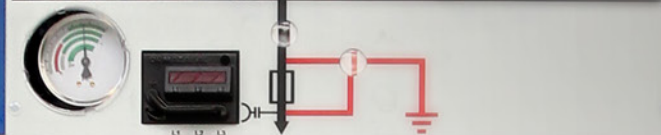
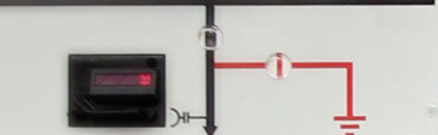
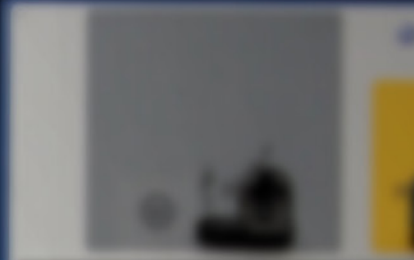
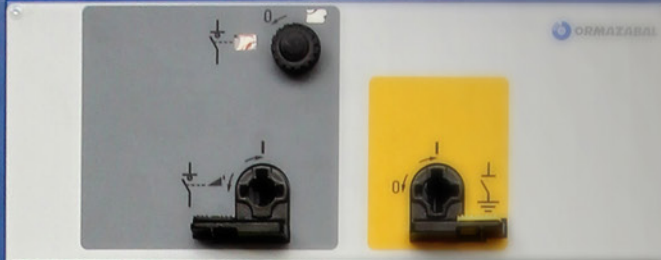
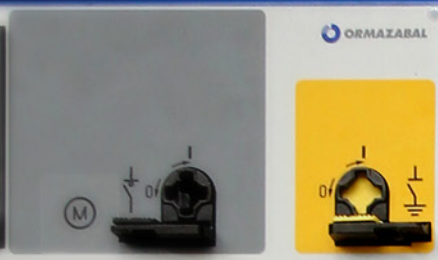


RTU



ORMAZABAL
velatia

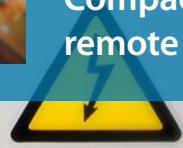


ekorsys units: protection,
telemangement & communication

cgmcosmos-2lpt

Compact cubicle with integrated
remote control equipment (Plug&Play)

Reliable innovation. Personal solutions.



Preface

- » Compact integral unit with remote control, composed by two feeder functional units and one fuse protection units (**cgmcosmos-2lpt** up to 24 kV and **cgm.3-2lpt** up to 36 kV), together with **ekorsys** units for automation and remote control functions:
- » Assembly optimised for remote control of Transformer Substations.
- » Extensible up to 5L-2P.
- » RMU compact unit (Ring Main Unit) + RTU (Remote Terminal Unit):
 - » Cubicles
 - » Control box:
 - » RTU
 - » AC/DC converter and battery charger
 - » Batteries
 - » Relay + toroidal current transformers

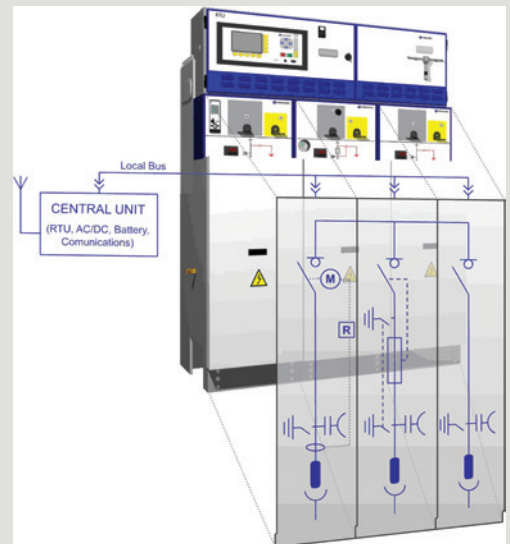
Standards

Applicable standards

IEC 60265
IEC 62271-105
IEC62271-102
IEC 60255
IEC 62271-1
IEC 62271-200
IEC 60265-1

Most notable features:

- » Plug&Play
- » Reduced height
- » Directional earth fault
- » Factory-installed toroidal current transformers
- » Meterings without VT
- » Factory-integrated RMU+RTU
- » Meterings and history logs accessible from the Internet (Web server)
- » Remotely configurable relays



Applications

- » Transformer and switching substation remote control:
 - » Metering of V, I, P and Q
 - » Detection, indication and communication of Faults
 - » Remote switchgear command
- » Telemangement in association with **ekor.gid** (Smart Grid):
 - » Automation and remote control
 - » Web Server
 - » Maintenance (fault detection, meterings, alarms...)
- » Automatic sectionaliser for line fault sections
- » Earthing prevention interlock
- » Automatic line transfer

Technical Characteristics

General

Assigned stress [kV]	12/24 [L-P]
Rated voltage	
On bushbars [A]	400/630 [L-P]
Outgoing line [A]	400/630 [L] 200 [P]
Rated current duration [kA]	16/20/25 (1 s) [L-P] 16/20 (3 s) [L-P]
Rated frequency [Hz]	50/60 [L-P]
Dimensions [L-P]	
Width [mm]	1190 [Low-High base]
Depth [mm]	735 [Low-High base]
Height [mm]	1460 [Low base] 1900 [High base]
Weight [kg]	370 [Low base] 290 [High base]

RTU Module

General	
AC [Vca]	230 +/-15%
Insulation [kV]	10
Consumption [W]	100
Output power supply voltage	
CC [Vdc]	48 y 12
Digital Inputs	24
Polarised voltage [Vdc]	30 to 80
Digital outputs	12
Contacts [Vac]	5 ^a / 250 / resistive

CPU	
RAM [MB]	16
Real time clock	hh:mm:ss:dd
Event log	1792
Graphic capacity	6 cubicles in display
Comunicaciones	
front port	RS232 - RJ45
DB9	
Rear port	RS485 (5 kV) - RJ45
Protocols	MODBUS (RTU) IEC-60870-5-101 IEC-60870-5-104 Web Server

Integrated Control Module

General	
AC [Vac]	24 a 100 +/-30%
Impedance [Ω]	0,1
Switched power [VA]	750 (resistive load)
Accuracy	
Time delay	5% (minimum 20 ms)
Current inputs	
Primary phase [A]	5 a 1200
Earth [A]	0,5 a 480
Thermal/dynamic [kA]	20 / 50
Output contact	
Voltage [Vac]	270
Current [A]	5 (CA)

