2ADF

Advanced Directional Fault Detector

IEC61850 based **IED** for **Automatic Circuit Breaker** automation in **Secondary Substation**

2ADF Technology

- IEC 61850 protocol used to share information via Goose Messages from one device to another. Coordination schemes supported.
- Software integration of the current measurement coming from Rogowski coil.
- Compatible with active and passive combined V-I sensors.

Compact Solution for MV Automation

The **2ADF** is a compact RTU with advanced protection, automation, monitoring and distributed generation functions.

The **2ADF** is specially designed to implement MV automation in RMU & recloser applications with different grounding method (grounded grids, ground isolated grids or compensated via Petersen coil).

Main Functions

- Protection.
- Automation.
- Monitoring.
- RTU.
- DER Management.

Remote Control Protocols

The **2ADF** can communicate with a control centre or SCADA system using different protocols: IEC 61850, IEC 60870-5-104, DNP3.

Equipment Interfaces

- One Fast Ethernet 10/100Base-Tx port + One Fiber 100Base-Fx port.

  It is also used for equipment configuration.
- Up to 6 digital inputs.
- Up to 5 digital outputs.
- Double functionality for analog values acquisition RGDM and RGDAT through 6 combined analog V-I Rogowski via RJ-45.
- Optional 1 serial console port (9-pin female SUB-D connector).
- LEDs for status indication.

Management System

- Local management through a console or HMI (display and buttons).
- Remote management through a built-in web server (HTTP/HTTPS), server. IEC 61850 management using ***ZIVercom Plus*** tool.

Technical Information

ANSI Functions	51 51N (2 units) 67 (3 units) 67N (3 units) 47 32P Arc Detection	VSS 27 59V2 59N 79 25 RVL
Analog Inputs	3 combined V-I inputs. 1 voltage synchronism input (busbar voltage). RGDM or RGDAT selectable mode.	
Current Analog Input	Input capacitance: Input resistance: Maximum Input value: Accuracy:	< 10 pF 10 KΩ (1%) 3.52 Vrms (10 Vpp) ±0.5%
Voltage Analog Inputs	Input capacitance: Input resistance: Maximum input value: Magnitude & angular accuracy: ±0.5%	< 10 pF 1 MΩ (1%) 3.54 Vrms (10 Vpp)
Digital Inputs & Outputs	Up to 6 DI. Up to 5 DO.	
Communication Protocols and Interfaces	**Ethernet**: 1 x 10/100 Base-Tx (RJ45) and 1 x 100Base-Fx. **Optional serial port**: 1 x RS232 (9 way D Type DTE). **Remote Control Protocols** IEC 61850, IEC 60870-5-104, DNP3.	
Electromagnetic Inmunity	IEC 60255-5 IEC 60255-22-1 IEC 61000-4-18 IEC 61000-4-4 Cl 4 IEC 61000-4-2 Cl 4 IEC 61000-4-5	IEEE C37.90.1 IEC 61000-4-6 Cl 3 IEC 61000-4-8 Cl 5 IEC 61000-4-9 Cl 5 IEC 61000-4-10 Cl 5 IEC 61000-4-16 Cl 4 EN 55022
Environmental and Mechanical	IEC 60068-2-1 IEC 60068-2-2 IEC 60068-2-78 IEC 60068-2-14	IEC 60068-2-6 IEC 60068-2-27
Power Supply	18 – 42 VDC (isolated). Maximum power consumption: 5 W	
Temperature Range	From -25°C to +70°C	

H2ADFD2001Iv00

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