

[Product selection](#) > REF615E\_1G price list

Please select your ordering code by clicking on the letters:

H	B	F	E	AF	AG	N	N	A	6	A	N	A	1	1G
---	---	---	---	----	----	---	---	---	---	---	---	---	---	----

#### — Relay casing and test switches

Complete Relay

**1**

Complete Relay with conformal coating

**3**

Complete Relay with conformal coating and with test switch installed and wired in 19" cover plate

**4**

Complete Relay with conformal coating and with test switch installed and wired for CombiFlex rack mounting

**H**

Complete Relay

**K**

Complete Relay with test switch installed and wired in 19" cover plate

**L**

Complete Relay with test switch installed and wired for CombiFlex rack mounting

#### — Standard

IEC

**B**

IEC

#### — Main Application

Feeder protection and control

**F**

Feeder protection and control

#### — Functional Application

E: Non-directional O/C, directional E/F, voltage based measurements and CB condition monitoring (RTD option)

**A**

A: Non-directional O/C and directional E/F

**B**

B: Non-directional O/C, directional E/F and CB condition monitoring (RTD option)

**C**

C: Non-directional O/C and non-directional E/F

**D**

D: Non-directional O/C, non-directional E/F and CB condition monitoring (RTD option)

**E**

E: Non-directional O/C, directional E/F, voltage based measurements and CB condition monitoring (RTD option)

**F**

F: Directional O/C, directional E/F, voltage based protections and CB condition monitoring (RTD option)

**G**

G: Directional O/C, directional E/F, voltage based protections & measurements and CB condition monitoring (Sensor inputs, optional synchro-check with IEC61850-9-2LE)

**H**

H: Non-directional O/C, Non-directional E/F, voltage & frequency based protection, synchro-check and CB condition monitoring (RTD option)

**J**

J: Directional O/C, directional E/F, voltage & frequency based protection, synchro-check and CB condition monitoring (optional power quality, RTD option)

**K**

K: Dir. and non-dir. O/C and E/F, high impedance restricted E/F, voltage & frequency based protection, synchro-check and CB cond. monitoring (optional power quality and fault locator)

**L**

L: Directional and non-directional O/C and E/F with multi-frequency neutral admittance, voltage & frequency & power based protection & measurements and CB condition monitoring (Sensor inputs, optional power quality, fault locator, interconnection protection and synchro-check with IEC61850-9-2LE)

**N**

N: Directional and non-directional O/C and E/F with multi-frequency neutral admittance, voltage & frequency & power based protection &

measurements, high imp. differential protection, synchro-check and CB condition monitoring (optional power quality, fault locator and

#### — **Analog Inputs/Outputs**

4I (Io 0.2/1A) + 5U

AA

4I (Io 1/5A) + U0

AB

4I (Io 0.2/1A) + U0

AC

4I (Io 1/5A)

AD

4I (Io 0.2/1A)

**AE**

4I (Io 1/5A) + 5U

**AF**

4I (Io 0.2/1A) + 5U

BC

5I (Io 1/5A) + 5U

DA

3Is + 3Us + Io (Io 0.2/1A)

FA

4I (Io 1/5A) + U0 + 6RTD + 2mA

FB

4I (Io 0.2/1A) + U0 + 6RTD + 2mA

FC

4I (Io 1/5A) + 6RTD + 2mA

FD

4I (Io 0.2/1A) + 6RTD + 2mA

FE

4I (Io 1/5A) + 5U + 2RTD + 1mA

FF

4I (Io 0.2/1A) + 5U + 2RTD + 1mA

#### — **Binary Inputs/Outputs**

16BI + 10BO

AA

3BI + 6BO

AB

4BI + 6BO

AC

11BI + 10BO

AD

12BI + 10BO

AE

17BI + 13BO

AF

18BI + 13BO

**AG**

16BI + 10BO

AH

8BI + 10BO

FA

17BI + 9BO + 3HSO

FB

18BI + 9BO + 3HSO

**FC**

16BI + 6BO + 3HSO

FD

8BI + 6BO + 3HSO

FE

12BI + 6BO + 3HSO

FG

11BI + 6BO + 3HSO

#### — **Communication (Serial)**

None

A

RS 485 (including IRIG-B)

B

Glassfibre ST

C

RS 232/485 + RS485 (including IRIG-B)

**N**

None

**— Communication (Ethernet)**

None

**A**

Ethernet 100Base FX (LC)

**B**

Ethernet 100Base TX (RJ45)

**C**

Ethernet 100Base FX (1xLC, 2xRJ45) with HSR/PRP

**D**

Ethernet 100Base TX (3xRJ45) with HSR/PRP

**E**

Ethernet 100Base FX (2xLC, 1xRJ45) with HSR/PRP

**F**

Ethernet 100Base FX (1xLC, 2xRJ45) with HSR/PRP and IEC61850-9-2LE

**G**

Ethernet 100Base TX (3xRJ45) with HSR/PRP and IEC61850-9-2LE

**H**

Ethernet 100Base FX (2xLC, 1xRJ45) with HSR/PRP and IEC61850-9-2LE

**N**

None

**— Communication (Protocol)**

IEC 61850

**A**

IEC 61850

**B**

Modbus

**C**

IEC 61850+Modbus

**D**

IEC 103

**E**

DNP 3.0

**G**

IEC 61850 + IEC103

**H**

IEC 61850 + DNP 3.0

**— Language**

English and Russian

**1**

English

**2**

English and Chinese

**3**

English and German

**4**

English and Swedish

**5**

English and Spanish

**6**

English and Russian

**7**

English and Polish

**8**

English and Portuguese (Brazilian)

**A**

English and Italian

**B**

English and Finnish

**C**

English and French

**E**

English and Czech

**L**

English and Turkish

**P**

English and Hungarian

**— Front Panel**

Small LCD

**A**

Small LCD

**B**

Large LCD with Single Line Diagram (SLD)

**C**

Small LCD with Chinese symbols

**D**

Large LCD with Single Line Diagram and Chinese symbols

**— Option 1**

None

**A**

Reclosing

**B**

Arc Protection

**C**

Arc Protection and reclosing

**D**

Power Quality

**E**

Power Quality and Reclosing

**F**

Power Quality and Arc Protection

**G**

Power Quality and Arc Protection and reclosing

**H**

Fault locator and Reclosing

**J**

Fault locator and Arc Protection

**K**

Fault locator and Arc Protection and Reclosing

**L**

Fault locator and Power Quality

**M**

Fault locator and Power Quality and Reclosing

**N**

None

**P**

Fault locator and Power Quality and Arc Protection

**Q**

Fault locator and Power Quality and Arc Protection and Reclosing

**— Option 2**

Directional E/F

**A**

Directional E/F

**B**

Admittance based E/F + Directional E/F

**C**

Wattmetric based E/F + Directional E/F

**D**

Harmonics based E/F + Directional E/F

**E**

Harmonics based E/F

**G**

Interconnection protection + Directional E/F

**H**

Interconnection protection and Admittance based E/F + Directional E/F

**J**

Interconnection protection and Wattmetric based E/F + Directional E/F

**K**

Interconnection protection and Harmonics based E/F + Directional E/F

**N**

None

**— Power Supply**

48-250 Vdc; 100-240 Vac

**1**

48-250 Vdc; 100-240 Vac

- 2**
  - Version**
    - 24-60 Vdc
      - Product Version 5.0 FP1
  - 1G**
    - Product Version 5.0 FP1