



# Synchronizing meters





| Model   | Syncro 96DF                            |           | Syncro 96DV                |             |                                     |                                     |          |                      |
|---|--|-----------|----------------------------|-------------|-------------------------------------|-------------------------------------|----------|----------------------|
| Codes   | ANRDF...                               |           | ANRDV...                   |             |                                     |                                     |          |                      |
| Ordering codes see page:                      | 05                                     |           | 05                         |             |                                     |                                     |          |                      |
| Type  | double frequencymeter                  |           | double voltmeter           |             |                                     |                                     |          |                      |
| Input voltage                                 | 100 - 115V<br>230 - 240V<br>400 - 440V |           | 100V (100%)<br>110V (100%) | 300V direct | 400/100V<br>400/110V<br>500V direct | 440/100V<br>440/110V<br>600V direct | 690/100V | .../100V<br>.../110V |
| Frequency                                     | 50Hz                                   | 60Hz      | 50 - 60Hz                  |             |                                     |                                     |          |                      |
| Scale   | 45...55Hz                              | 55...65Hz | 0...120%                   | 0...300V    | 0...500V                            | 0...600V                            | 0...900V | on request           |
| Accuracy class                                | 0,5                                    |           | 1,5                        |             |                                     |                                     |          |                      |
| Front housing protection                      | IP52                                   |           | IP52                       |             |                                     |                                     |          |                      |
| Terminal protection                           | IP00                                   |           | IP00                       |             |                                     |                                     |          |                      |
| Dimensions                                    | 96x96x124 mm                           |           | 96x96x124 mm               |             |                                     |                                     |          |                      |
| Technical note                                | NT800                                  |           | NT801                      |             |                                     |                                     |          |                      |
| Price   |  |           |                            |             |                                     |                                     |          |                      |
| Extra price for IP54 front housing protection | •                                      |           | •                          |             |                                     |                                     |          |                      |



| Model   | Syncro 96FD                 | Syncro 96VD            |
|---|-----------------------------|------------------------|
| Codes   | ANRFD...                    | ANRVD...               |
| Ordering codes see page:                      | 05                          | 06                     |
| Type  | differential frequencymeter | differential voltmeter |
| Input voltage                                 | 100V<br>110 - 115V          | 100V<br>110V           |
| Frequency                                     | 50 - 60Hz                   | 50 - 60Hz              |
| Scale   | 20...0...20ΔHz%             | 20...0...20ΔVn%        |
| Accuracy class                                | 1                           | 1                      |
| Front housing protection                      | IP52                        | IP52                   |
| Terminal protection                           | IP20*                       | IP20*                  |
| Dimensions                                    | 96x96x84 mm                 | 96x96x84 mm            |
| Technical note                                | NT802                       | NT803                  |
| Price   |                             |                        |
| Extra price for IP54 front housing protection | •                           | •                      |

\* with terminal covers



| Model   | Syncro 96C  |            | Syncro 96L                             | Syncro 96Z    |
|---|---|------------|--|---------------|
| Codes   | ANTJ...   |            | ANRJ...                                | ANRG...       |
| Ordering codes see page:                      | 06  |            | 05                                     | 05            |
| Type  | LED synchroscope with contact   |            | LED synchroscope                       | nullvoltmeter |
| Input voltage                                 | 30...150V   | 110...600V | 100 - 115V<br>230 - 240V<br>400 - 440V | 100V          |
| Frequency                                     | 35...80Hz   |            | 50 - 60Hz                              | 50 - 60Hz     |
| A.C. auxiliary supply                         | 100V  | 400V       |  |               |
| D.C. auxiliary supply                         | 24V   |            |  |               |
| Synchronizing analogue indication             | 19 red LED on 360°  |            | 16 red LED on 360°                     | scale 0...50V |
| Digital indication                            | Red LED display for phase-angle, line/generator voltage, voltage difference, line/generator frequency, frequency difference display |            |  |               |
| Synchronizing relay output                    | 1 SPDT contact  |            |  |               |
| Front housing protection                      | IP54  |            | IP52                                   | IP52          |
| Terminal protection                           | IP20  |            | IP20*                                  | IP20*         |
| Dimensions                                    | 96x96x87,5 mm   |            | 96x96x105 mm                           | 96x96x69 mm   |
| Technical note                                | NT595   |            | NT804                                  | NT805         |
| Price   |   |            |  |               |
| Extra price d.c. auxiliary supply             | •   |            |  |               |
| Extra price for IP54 front housing protection |   |            | •                                      | •             |

\* with terminal covers

| ACCESSORY |   |  |
|-----------|---|--|
| code      | description   |  |
| AV960     | frame for 3 single Syncro 96 indicators assembling (available composition Syncro 96DV or Syncro 96VD + Syncro 96C or Syncro 96L or Syncro 96Z + Syncro 96DF or Syncro 96FD) |  |

### Synco 96DF Double frequencymeter

96x96mm

| Ordering code | Scale     | Voltage    | Stock |
|---------------|-----------|------------|-------|
| ANRDF 1 1     | 45...55Hz | 100 + 115V | •     |
| ANRDF 1 3     | 45...55Hz | 230 + 240V |       |
| ANRDF 1 4     | 45...55Hz | 400 + 440V | •     |
| ANRDF 3 1     | 55...65Hz | 100 + 115V |       |
| ANRDF 3 3     | 55...65Hz | 230 + 240V |       |
| ANRDF 3 4     | 55...65Hz | 400 + 440V |       |

#### Other executions

| Ordering code | front protection |
|---------------|------------------|
| ANRDF ... 3   | IP54             |

### Synco 96DV Double voltmeter

96x96mm

| Ordering code | Scale      | Voltage    | Frequency | Stock | Data to be shown in addition to ordering code |
|---------------|------------|------------|-----------|-------|---|
| ANRDV 1 1     | 0...120%   | 100%=100V  | 50 + 60Hz | •     |   |
| ANRDV 1 2     | 0...120%   | 100%=110V  | 50 + 60Hz |       |   |
| ANRDV 2 3     | 0...500V   | 500V       | 50 + 60Hz |       |   |
| ANRDV 2 4     | 0...500V   | 400/100V   | 50 + 60Hz | •     |   |
| ANRDV 2 5     | 0...500V   | 400/110V   | 50 + 60Hz |       |   |
| ANRDV 3 3     | 0...600V   | 600V       | 50 + 60Hz |       |   |
| ANRDV 3 4     | 0...600V   | 440/100V   | 50 + 60Hz |       |   |
| ANRDV 3 5     | 0...600V   | 440/110V   | 50 + 60Hz |       |   |
| ANRDV 4 8     | 0...900V   | 690/100V   | 50 + 60Hz |       |   |
| ANRDV 5 3     | 0...300V   | 300V       | 50 + 60Hz |       |   |
| ANRDV PP      | On request | On request | 50 + 60Hz |       | scale and VT ratio                            |

#### Other executions

| Ordering code | front protection |
|---------------|------------------|
| ANRDV ... 3   | IP54             |

### Synco 96FD Differential frequencymeter

96x96mm

| Ordering code | Scale           | Voltage    | Frequency | Stock |
|---------------|-----------------|------------|-----------|-------|
| ANRFD 1 1     | 20...0...20ΔHz% | 100V       | 50Hz      |       |
| ANRFD 1 2     | 20...0...20ΔHz% | 110 + 115V | 50Hz      |       |
| ANRFD 3 1     | 20...0...20ΔHz% | 100V       | 60Hz      |       |
| ANRFD 3 2     | 20...0...20ΔHz% | 110 + 115V | 60Hz      |       |

#### Other executions

| Ordering code | front protection |
|---------------|------------------|
| ANRFD ... 3   | IP54             |

### Synco 96Z Nullvoltmeter

96x96mm

| Ordering code | Scale   | Voltage | Frequency | Stock |
|---------------|---------|---------|-----------|-------|
| ANRG 1        | 0...50V | 100V    | 50 + 60Hz | •     |

#### Other executions

| Ordering code | front protection |
|---------------|------------------|
| ANRG 1 3      | IP54             |

### Synco 96L LED synchroscope

96x96mm

| Ordering code | Scale | Voltage    | Frequency | Stock |
|---------------|-------|------------|-----------|-------|
| ANR J 1       | -     | 100 + 115V | 50 + 60Hz | •     |
| ANR J 2       | -     | 230 + 240V | 50 + 60Hz |       |
| ANR J 3       | -     | 400 + 440V | 50 + 60Hz | •     |

#### Other executions

| Ordering code | front protection |
|---------------|------------------|
| ANR J ... 3   | IP54             |

**Syncro 96VD** Differential voltmeter

96x96mm

| Ordering code | Scale           | Voltage | Frequency | Stock |
|---------------|-----------------|---------|-----------|-------|
| ANRVD1        | 20...0...20ΔVn% | 100V    | 50 + 60Hz |       |
| ANRVD2        | 20...0...20ΔVn% | 110V    | 50 + 60Hz |       |

**Other executions**

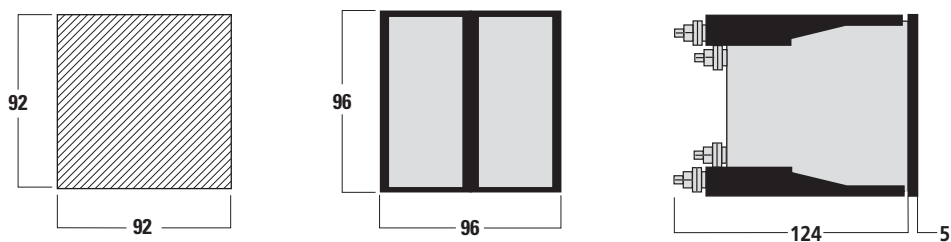
| Ordering code   | front protection |
|-----------------|------------------|
| ANRVD...<br>3 ← | IP54             |

**Syncro 96C** LED synchroscope with contact

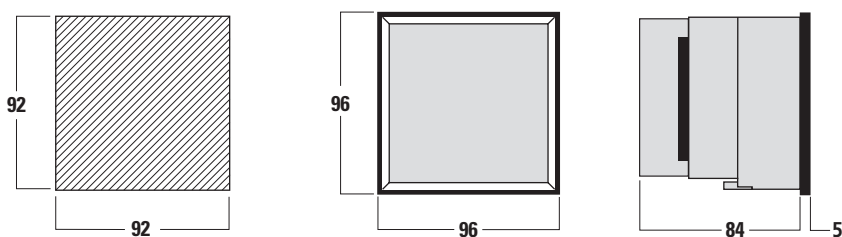
96x96mm

| Ordering code | Al.Ausiliaria | Voltage    | Frequency | Stock |
|---------------|---------------|------------|-----------|-------|
| ANTJ10        | 24Vd.c.       | 110...600V | 35...80Hz |       |
| ANTJ11        | 24Vd.c.       | 30...150V  | 35...80Hz |       |
| ANTJ21        | 100Va.c.      | 30...150V  | 35...80Hz | •     |
| ANTJ30        | 400Va.c.      | 110...600V | 35...80Hz | •     |

**Syncro 96DF / Syncro 96DV**

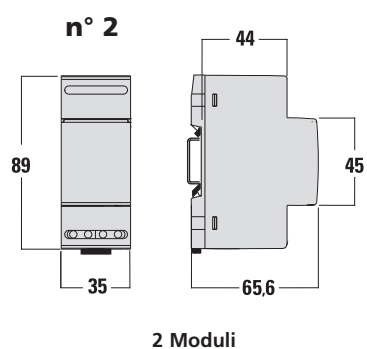
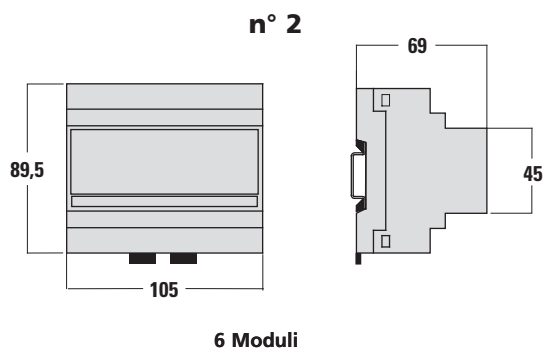


**Syncro 96FD / Syncro 96VD**

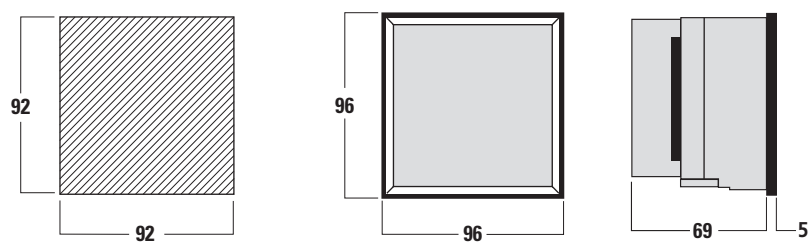


**Accessories for Syncro 96FD**

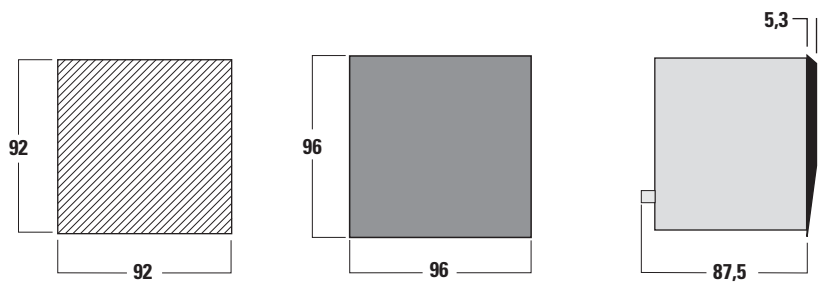
**Accessories for Syncro 96VD**



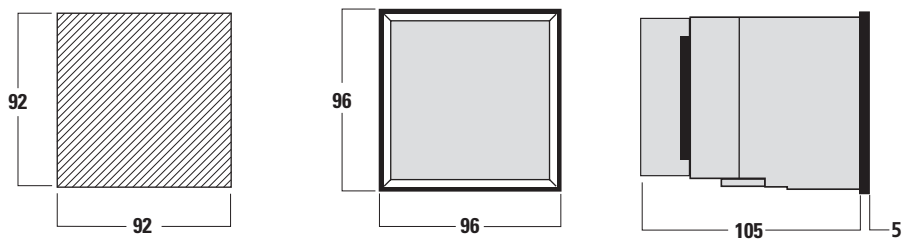
**Syncro 96Z**



## Syncro 96C



## Syncro 96L



## Frame for synchronizing group

