

# Current and Voltage Controls Current Transformer, 3-Phase Types A 74-10, A 74-11

CARLO GAVAZZI



- 3-phase current metering transformers for use with current control relays
- Measuring ranges:  
A 74-10 5: 0.5 - 5 AAC  
A 74-10 20: 2 - 20 AAC  
A 74-11 100: 10 - 100 AAC  
A 74-11 500: 50 - 500 AAC

## Product Description

3-phase current transformer measures on all three phases. Output voltage proportional to measured amplitude of the rms-value of the normal phase current.

## Ordering Key

**A 74-10 5**

Type \_\_\_\_\_  
Input current \_\_\_\_\_

## Type Selection

| Input current | Type no.    |
|---------------|-------------|
| 5 AAC         | A 74-10 5   |
| 20 AAC        | A 74-10 20  |
| 100 AAC       | A 74-11 100 |
| 500 AAC       | A 74-11 500 |

## Input Specifications

|   | A 74-10 5                                  | A 74-10 20                                 | A 74-11 100                                | A 74-11 500                                |
|---|--|--|--|--|
| <b>Current range</b>  | 0.5 - 5 AAC                                | 2 - 20 AAC                                 | 10 - 100 AAC                               | 50 - 500 AAC                               |
| <b>Max. current</b> (continuously)  | 20 AAC                                     | 50 AAC                                     | 250 AAC                                    | 750 AAC                                    |
| <b>Max. overload current</b> (t = 30 s)   | 40 AAC                                     | 85 AAC                                     | 325 AAC                                    | 1000 AAC                                   |
| <b>Rated insulation voltage</b><br>Input-output                                   | 1000 VAC <sub>rms</sub>                    | 1000 VAC <sub>rms</sub>                    | 1000 VAC <sub>rms</sub>                    | 1000 VAC <sub>rms</sub>                    |
| <b>Overvoltage category</b>   | IV (IEC 60664)                             | IV (IEC 60664)                             | IV (IEC 60664)                             | IV (IEC 60664)                             |
| <b>Dielectric strength</b><br>Dielectric voltage<br>Rated impulse withstand volt. | 6 kVAC <sub>rms</sub><br>12 kV (1.2/50 μs) | 6 kVAC <sub>rms</sub><br>12 kV (1.2/50 μs) | 6 kVAC <sub>rms</sub><br>12 kV (1.2/50 μs) | 6 kVAC <sub>rms</sub><br>12 kV (1.2/50 μs) |
| <b>Power consumption</b>  | < 0.1 W@5 A                                | < 0.25 W@20 A                              | < 1.5 W@100 A                              | < 21 W@1500 A                              |

## Output Specifications

|  | A 74-10 5              | A 74-10 20             | A 74-11 100            | A 74-11 500            |
|--|------------------------|------------------------|------------------------|------------------------|
| <b>Output voltage</b><br>(T <sub>A</sub> = 20°C = 68°F, R <sub>L</sub> = 9.5 kΩ) | 0.4 - 4 V <sub>p</sub> | 0.4 - 4 V <sub>p</sub> | 0.4 - 4 V <sub>p</sub> | 0.4 - 4 V <sub>p</sub> |
| <b>Output impedance</b>  | < 700 Ω                | < 200 Ω                | < 40 Ω                 | < 10 Ω                 |
| <b>Tolerance of output voltage</b><br>@ rated input current                      | ± 5%                   | ± 5%                   | ± 5%                   | ± 5%                   |
| <b>Temperature variation</b>   | ± 0.1% per °C          | ± 0.1% per °C          | ± 0.1% per °C          | ± 0.1% per °C          |
| <b>Rated insulation voltage</b> (cable)  | 250 VAC <sub>rms</sub> | 250 VAC <sub>rms</sub> | 250 VAC <sub>rms</sub> | 250 VAC <sub>rms</sub> |



## General Specifications

|                            |                                  |                  |
|----------------------------|----------------------------------|------------------|
| <b>Pollution degree</b>    | 3 (IEC 60664)                    |                  |
| <b>Ambient temperature</b> | - 20 to + 60°C (- 4 to + 140°F)  |                  |
| <b>Housing</b>             |                                  |                  |
| Dimensions                 | A74-10                           | 120 x 45 x 16 mm |
|                            | A74-11                           | 150 x 114 x 23   |
| Material                   | ABS                              |                  |
| <b>Weight</b>              | A 74-10                          | 200 g            |
|                            | A 74-11                          | 750 g            |
| <b>Connection cable</b>    | 2 m PVC, 4 x 0.4 mm <sup>2</sup> |                  |
| <b>Approval</b>            | UL                               |                  |
| <b>CE Marking</b>          | Yes                              |                  |

## Mode of Operation

The current metering transformer is connected to the current control relays H 475 as follows:

**Red core to term. 5** - U<sub>1</sub>.  
**White core to term. 6** - U<sub>2</sub>.  
**Yellow core to term. 7** - U<sub>3</sub>.  
**Black core to term. 8.** (starpoint - neutral).

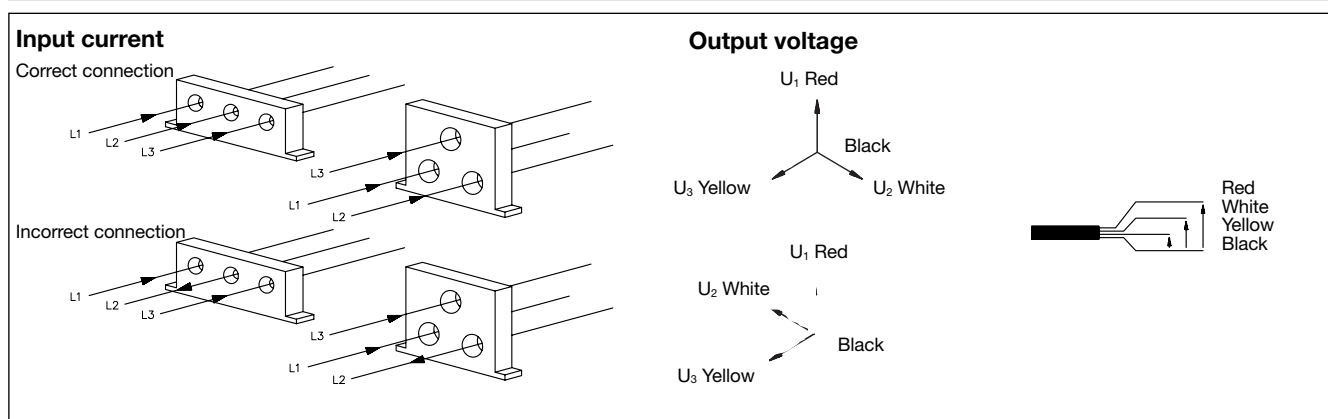
ductor through the hole several times makes it possible to meter currents below the nominal range.

If the conductor is drawn through the central hole e.g. 5 times, the metering transformer will register 50 A when the current in the conductor is 10 A.

The metered conductor is drawn through the central hole of the current metering transformer. Drawing the con-

In amplitude and phase the output voltage is proportional to the phase current metered.

## Wiring Diagrams



## Dimensions

