

# Schneider Electric

# The CDSc has been designed with your needs in mind

# CDSc use means

- Load-shedding and reconnection of up to four non-priority circuits.
- The electrical installation is divided into 5 parts including:
- □ 1 priority circuit, which is never interrupted.
  - E.g.: lighting, power outlets, electric range, refrigerator, etc.
- 4 non-priority circuits which are interrupted by load-shedding if the total load consumption exceeds the current setting on the incoming circuit breaker.
   E.g.: electric heating or hot water heater circuits.

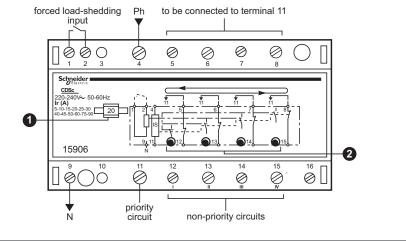
#### CDSc applications mean

■ Power consumption is kept below the installed load or the subscribed power on the electricity board contract, optimizing consumption and avoiding the tripping of the line protective device or incoming circuit breaker.

# Discovering your CDSc

# Legend

- 1 Setting.
- 2 Indicating light illuminated = circuit off (shed).

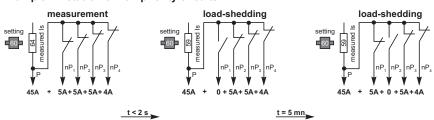


# CDSc operating principle means

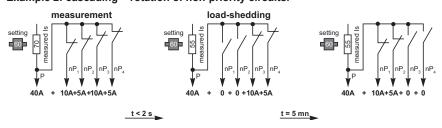
- The CDSc monitors your consumption, automatically disconnecting one or more nonpriority circuits when the set threshold is exceeded.
- Load-shedding circuit selection based on cascading followed by rotation (i.e. cyclic load-shedding), as illustrated in the example below.

  □ shed circuits are indicated by a
- shed circuits are indicated by a yellow light.
- After a time delay of approximately 5 minutes, the shed circuits are automatically reconnected and remain on if the overload has been cleared. If the overload presists, another load-shed-ding cycle is initiated.
- The four non-priority circuits may also be disconnected simultaneously by either a forced load-shedding order (via a volt-free contact connected to terminals 1 and 2), by a control relay or by a time switch such as the IH, IHP, ect.

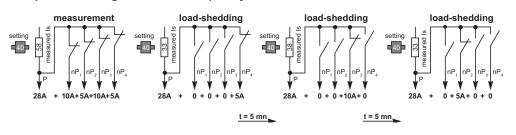
### Example 1: rotation of non-priority circuits.



Example 2: cascading + rotation of non-priority circuits.



Example 3: cascading + rotation of non-priority circuits.



### **CAUTION**

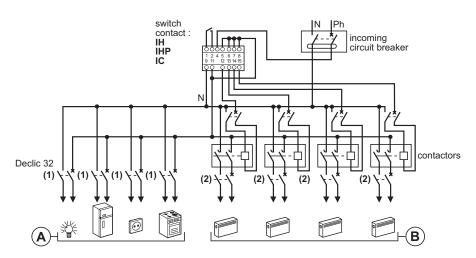
Non-priority outputs must not be directly connected:

Non-priority outputs must be relayed using contactors.

#### **Fixing**

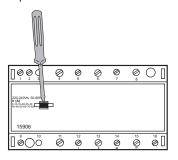


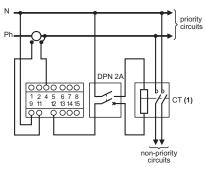
- By clipping onto a 35 mm DIN rail.
- By two 4 mm diameter screws onto any panel (in any position).
- (1) Determine the circuit breaker ratings in terms of the cable cross-sectional areas
- (2) Calculate the contactor ratings in terms of the load power ratings.
- Non-sheddable priority loads.
- B Sheddable non-priority loads.



# Setting your CDSc

- To shed currents greater than 90A, the CDSc must be used together with current transformer.
- □ set the selector to the secondary current of the CT used, ie. generally 5 A.
- Using a screwdriver, set the selector to the required rating (generally the rating of the incoming circuit breaker).
- The selector setting can be sealed in each position.





(1) Calculate the contactor ratings in terms of the load power ratings.

### **Technical data**

- Input voltage: 220 V  $\sim$  ± 15 % 240 V  $\sim$  ± 6 %
- Frequency: 50/60 Hz.
- Power consumption: 4 VA maxi.
- Current ratings:
- $\Box$  priority circuit: 90 A cos  $\varphi$  = 1
- $\Box$  non-priority circuits (volt-free): 2 A cos  $\phi$  = 1
- Settings: 5, 10, 15, 20, 25, 30, 40, 45, 50, 60, 75, 90 A
- Load-shedding time: less than 2 s at 1.1 lr.
- Load reconnection delay: 5 mn 30 s.

- Connection terminal capacities:
- □ priority circuit: (10 à 50 mm² solid cable) 35 mm² (flex),
- □ non-priority circuit, neutral and forced input terminals: 1.5 to 10 mm² (solid and flexible cable).
- "Tightening torque":
- □ priority circuit: 3.5 Nm
- □ non-priority circuit, neutral and forced load shedding input: 2 Nm.
- Temperature range: 25 °C to + 60 °C.
- Dimensions: 16 width modules (1 module = 9 mm).
- Weight: 0,60 kg. (approx.).

#### Schneider Electric Industries SAS

35, rue Joseph Monier CS 30323 92506 Rueil Malmaison Cedex France

RCS Nanterre 954 503 439 Capital social 896 313 776 € www.schneider-electric.com

#### Ce produit doit être installé, raccordé et utilisé en respectant les normes et/ou les règlements d'installation en vigueur.

En raison de l'évolution des normes et du matériel, les caractéristiques et cotes d'encombrement données ne nous engagent qu'après confirmation par nos services

This product must be installed, connected and used in compliance with prevailing standards and/or installation regulations.

As standards, specifications and designs change from time to time, always ask for confirmation of the information given in this publication.

© 04-2011 Schneider Electric - All rights reserved.