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## NRNT.E198086 Switches, Industrial Control

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### Switches, Industrial Control

See General Information for Switches, Industrial Control

**CROUZET AUTOMATISMES S A**  
ZONE INDUSTRIELLE  
BOITE POSTALE N3  
14540 BOURGUEBUS, FRANCE

E198086

**Control relays**, Part No. 84 87 followed by 0, followed by 0, 1, 3, 4, 5 or 6, followed by 0, 2 or 3, followed by 1, 2, 3, 4, 6, 7, 8 or 9.

Part No. 84 8702 followed by 0 or 1, followed by 1, 3 or 4.

Part No. 84 87 followed by 1, followed by 0, 1, 2 or 3, followed by 0 or 1, followed by 0 through 9.

Part No. 84 87 followed by 2, followed by 0, 1, 2 or 3, followed by 0 or 1, followed by 0, 1, 2, 4, 5, 6, 7 or 9.

Part No. 84 87 followed by 3, followed by 0, 1, 2, 3, 4 or 5, followed by 0 or 1, followed by 0, 1, 2, 3, 4, 5 or 6.

Part No. 84 89 followed by 2 or 3, followed by 2 or 8, followed by 9 or 4, followed by 0 or 9.

Part No. 88 89 followed by 9, followed by 2, followed by 0, followed by 4.

Part No. 84 87 followed by 4, followed by 0, 1 or 3, followed by 0, 1, 2 or 3 followed by 0, 1, 2, 3, 4 or 5.

Part No. 84 8710 followed by 2, 3 or 4, followed by 0, 1, 2, 3 or 4.

Part No. 84 8720 followed by 2, 3 4 or 5, followed by 0, 1, 3, 4 6 or 7.

Part No. 84 87 followed by 3, followed by 0 or 5, followed by 0 or 1, followed by 1, 2 or 4.

Part No. 84 89 followed by 2, followed by 2, followed by 9, followed by 9.

**Electronic timers**, Part No. 88 826 followed by 1 or 5 followed by 0 through 5, 8 or 9, followed by 0, 3, 5 or 7.

Part No. 88 826 followed by 0, followed by 0, 1, 4 or 5, followed by 4.

Part No. 88 865 followed by 1, 2, 3 or 5, followed by 0 through 8, followed by 0, 3, 5, or 6.

Part No. 88 867 followed by 1, 2 or 8, followed by 0, 1, 3, 5, 6 or 8, followed by 0, 3 or 5.

Part No. 88 867 followed by 3 or 4, followed by 0, 1, 3, 5 or 8, followed by 0, 3 or 5.

Part Nos. 88 826, 865 or 867 8XX.

Type No. M, T, 0 or P followed by U, A, B, C, H, L, Q, K or X, followed by R, 2R or S, may be followed by C, followed by 1, 2, 3, 4 or 5.

Type No. OCR1 SP0005.

**Safety logic block**, Part No. 85 10 followed by 0 or 1, followed by 0, 3, 5, 6, 7 or 9, followed by 2 or 3, followed by 4, 5, 6 or 7.

**Electronic counter**, Part No. 87 618 followed by 0, 1, 2 or 3, followed by 1, 2, 3, 4, 6 or 7, followed by 2, 4, or 8.

**Hybrid relays**, Model No. 84138 followed by 0, 1, or 2, followed by 00, 01 or 02; Model No. 84138 followed by 800 through 899.

Part No. 87 619 followed by 0, 1, 2, 3, 4 or 5, followed by 1 or 2, followed by 2, 4 or 8.

Part No. 87 610 followed by 0, 1, 2, 3 or 4, followed by 4 or 5, followed by 0.

**Time delay switches**, Cat. No. MBA 889013 followed by 0, 2, 4, 7 or 9, followed by 2 or 8; Part No. 88 901 800 through 899.

Part Nos. 84 8XX 800 through 899.

All part numbers may be followed by 800 through 899.

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## NRNT.GuideInfo Switches, Industrial Control

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### [Industrial Control Equipment] Switches, Industrial Control

#### See General Information for Industrial Control Equipment

This listing cover the following products:

Magnetically operated switches

Manually operated switches

Meter switches

Photoelectric switches

Solid state switches

Switches rated in horsepower and with or without pilot duty ratings for use in control circuits are listed under "Motor Controllers."

Open type switches are listed for use as parts of equipment where the acceptability of the combination has been determined by Underwriters Laboratories Inc. or where open type switches may be employed.

Switches have been tested to determine their acceptability for continuous operation at their marked rated load.

The basic standard used to investigate products in this category is UL 508, "Electric Industrial Control Equipment".

The Listing Mark of Underwriters Laboratories Inc. on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Industrial Control Equipment" (or "Ind. Cont. Eq." ).

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# NIMX.GuideInfo

## Industrial Control Equipment

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### Industrial Control Equipment

#### Guide Information for Electrical Equipment for Use in Ordinary Locations

The listing covers the following products:

Industrial Control Panels

Motor Control Centers

Motor Controllers

Miscellaneous Apparatus

Programmable Controllers

Industrial Control Switches

Enclosed industrial control equipment identified with an enclosure type designation is intended for use as indicated in the guide information at the front of this directory (AALZ).

Industrial Control Equipment, is for use with copper conductors unless marked to indicate which terminals are suitable for use with aluminum conductors. Such marking is independent of any marking on terminal connectors and is on a wiring diagram or other readily visible location.

Industrial Control Equipment, for which accessory kits are available for the field or distributor modification of the basic product or which may be assembled in many forms from separate components are marked to indicate the suitable accessories or separate components which may be used.

#### Control Panels

If the sealed rating of the operating coil circuit of a magnetically operated industrial control device exceeds 125 volt-amperes, the coil circuit rating is marked on the device.

Overload relays or industrial control equipment incorporating overload relays are identified as to their maximum tripping time at 600 per cent of the overload relay current element trip rating. The designations "Class 10, Class 20, and Class 30" are used to identify the maximum tripping times, with the Class number indicating the maximum tripping time in seconds. Overload relays with maximum tripping times of 10 or 30 seconds are marked Class 10 or Class 30 respectively. Overload relays with a maximum tripping time of 20 seconds may be marked Class 20. Overload relays with tripping times in excess of 30 seconds are marked with their maximum tripping times. All unmarked overload relays have a maximum tripping time of 20 seconds.

There are open, across-the-line starters intended for bolt on mounting to panelboards and dead front switchboards and are so restricted by the Listing Mark. They are provided with a cover or door and the remaining portions of the enclosure are provided by the panel or switchboard enclosure.

Some industrial control equipment is suitable for use as service equipment and may be so marked. Such marking is part of the Listing Mark or is an integral part of other required markings.

Some of the equipment listed in this category has also been investigated for use aboard marine vessels over 65 ft. in length as covered by the Electrical Engineering Regulations of the United States Coast Guard, Subchapter J, CG-259, (46 CFR Parts 110-113).

The Electrical Engineering Regulations of the United States Coast Guard classify marine type equipment as "Non-Watertight," "Drip-proof," or "Watertight."

Some industrial control equipment incorporates neutrals factory bonded to the frame or enclosure. Such units are marked "Suitable Only For Use As Service Equipment."

Open type across-the-line starters designed only for use in panelboards or dead front switchboards employ Listing Marks with the product identity "INDUSTRIAL CONTROL EQUIPMENT FOR USE IN PANELBOARDS AND DEAD FRONT SWITCHBOARDS" or "IND. CONT. EQ. FOR USE IN PANELBOARDS AND DEAD FRONT SWITCHBOARDS."

For other than industrial control panels, and unless indicated otherwise in the general information for the following subcategories, enclosed type product Listing Marks contain the product identity "INDUSTRIAL CONTROL EQUIPMENT" or the abbreviation "IND. CONT. EQ." on the enclosure, or the product identity "INDUSTRIAL CONTROL EQUIPMENT ENCLOSED" on the mechanism mounted within the enclosure. In either case, the Listing Mark indicates that the overall product with its enclosure is Listed.

Enclosures for use with open type products employ Listing Marks with the product identification "Enclosure For Industrial Control Equipment" or "Enclosure For Ind. Cont. Eq." and are marked to specify the Listed open type products to be installed within. Look for a Listing Mark on both the enclosure and the open mechanism.

For industrial control panels, one of the following product identities appears on the Listing Mark: "Open Industrial Control Panel", "Industrial Control Panel Enclosure", "Enclosed Industrial Control Panel".

The "Enclosed Industrial Control Panel" Listing Mark covers both the enclosure and the panel provided with it. Open panels employ the "Open Industrial Control Panel" Listing Mark. The "Industrial Control Panel Enclosure" Listing Mark covers only the enclosure; the compatibility of the enclosure and the installed equipment and associated wiring has not been investigated unless an "Enclosed Industrial Control Panel" Listing Mark is also present.

The Listing Mark of Underwriters Laboratories Inc. on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and one of the following product names as appropriate: "Industrial Control Equipment" (or "Ind. Cont. Eq."); "Marine Industrial Control Equipment For Use Only On Vessels Over 65 Feet".

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