

Components for control stations in all materials

TECHNICAL DATA

Mounting components on Pre-drilled control stations

Boxes

- Boxes are supplied fitted with a DIN rail for easier installation. The DIN rails are either only vertical, or horizontal or vertical, depending on the material selected

| DIN rail position | Material | | | |
|-------------------|---|---|---|---|
| | Polyamide | Stainless steel 316 L | Aluminium | Polyester |
| Horizontal | | |  |  |
| Vertical |  |  |  |  |

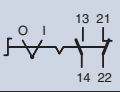
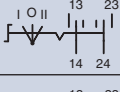
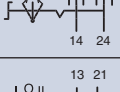
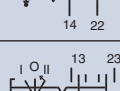
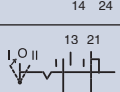
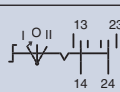
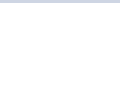
Components

- The contact blocks, indicators, changeover selector switches, double pole switches, 4-pole control and load break switches can be mounted on either vertical or horizontal DIN rails.
- Indicator lens units, push-buttons, emergency stop buttons and key switch buttons can be used on boxes fitted with either vertical or horizontal DIN rails.
- Ammeters can only be mounted on vertical rails**
- Rotating switch handle

IMPORTANT :

All rotating switch handles have two catalogue numbers depending on whether they actuate a component fixed on a vertical or horizontal rail.

Rotating switch handle selection guide :

| Function | Connection | Components | Mounting on horizontal rail | Mounting on vertical rail |
|-----------------------------|---|----------------------------------|-----------------------------|---------------------------|
| 2 positions 0 - I |  | Switch handle NC + NO contact | 0983 24 0981 02 | 0983 23 0981 02 |
| 3 positions I - 0 - II |  | Switch handle 2 NO contacts | 0983 34 0981 00 | 0983 30 0981 00 |
| 3 positions I -> 0 <- II |  | Switch handle 2 NO contacts | 0983 35 0981 00 | 0983 31 0981 00 |
| 3 positions I - 0 <- II |  | Switch handle NC + NO contact | 0983 36 0981 02 | 0983 32 0981 02 |
| 3 positions I - 0 <- II |  | Switch handle 2 NO contacts | 0983 36 0981 00 | 0983 32 0981 00 |
| 3 positions I -> 0 - II |  | Switch handle NC + NO contact | 0983 37 0981 02 | 0983 33 0981 02 |
| 3 positions I -> 0 - II |  | Switch handle 2 NO contacts | 0983 37 0981 00 | 0983 33 0981 00 |

Data sheet available on request



0983 00

0983 03

0983 31

0981 02

Indicators, push-buttons switch handles and contacts blocks

Supplied with 1 seal, 1 special nut and key*

Push-button for mounting on a horizontal and vertical rail

| | Weight (Kg) | Cat. No. | Pack |
|---|-------------|----------------|------|
| Push-button supplied with red, green, yellow and white inserts | 0.046 | 0983 00 | 1 |
| Red mushroom-head push-button, spring return | 0.046 | 0985 01 | 1 |
| Black mushroom-head push-button, spring return | 0.046 | 0983 01 | 1 |
| Red EMERGENCY STOP mushroom-head, key switch | 0.046 | 0983 02 | 1 |
| Red EMERGENCY STOP push-pull mushroom-head | 0.046 | 0983 03 | 1 |
| Impulse push-button Lockable in both positions key* retractable in both positions | 0.069 | 0983 20 | 1 |
| Impulse push-button Lockable in the depressed position key* retractable in the depressed position | 0.069 | 0983 21 | 1 |
| Impulse push-button Lockable in the initial position key* retractable in the initial position | 0.069 | 0983 22 | 1 |
| Blanking plug | 0.046 | 0983 38 | 1 |

Switch handle for mounting on a horizontal or vertical rail

| | Weight (Kg) | Cat. No. Horizontal rail | Cat. No. Vertical rail | Pack |
|---|-------------|--------------------------|------------------------|------|
| Black switch handle 2 positions 0 - I latching | 0.033 | 0983 24 | 0983 23 | 1 |
| Black switch handle 3 pos. I-0-II (I and II latching) | 0.033 | 0983 34 | 0983 30 | 1 |
| Black switch handle 3 pos. I-0-II (I and II spring return) | 0.033 | 0983 35 | 0983 31 | 1 |
| Black switch handle 3 positions I-0-II Spring return from II to 0 | 0.033 | 0983 36 | 0983 32 | 1 |
| Black switch handle 3 positions I-0-II Spring return from I to 0 | 0.033 | 0983 37 | 0983 33 | 1 |

Contact components for mounting at the bottom of the box on a horizontal and vertical rail

| | Weight (Kg) | Cat. No. | Pack |
|--|-------------|----------------|------|
| • Connection via 2 x 2.5 mm ² terminals | | | |
| 2 NO contacts | 0.09 | 0981 00 | 1 |
| 2 NC contacts | 0.09 | 0981 01 | 1 |
| 1 NO + 1 NC contact | 0.09 | 0981 02 | 1 |

Part number in bold : fast moving references



Ammeter 0986 51

Ferromagnetic ammeter

- Direct mounting on vertical rail
- Class 2.5 - Deviation 90°
- Red Adjustable index
- Standard square bezel, 48 x 48 mm
- Connection via 2 x 2.5 mm² terminals
- For use with current transformers

| | Weight (kg) | Volume (dm ³) | Cat. No. | Pack |
|------------------------|-------------|---------------------------|----------------|------|
| For 1 A C.T. 0-1-3 Flc | 0.1 | 0.4 | 0986 51 | 1 |
| For 1 A C.T. 0-1-5 Flc | 0.1 | 0.4 | 0989 52 | 1 |
| For 1 A C.T. 0-1-6 Flc | 0.1 | 0.4 | 0989 53 | 1 |
| For 5 A C.T. 0-1-3 Flc | 0.1 | 0.4 | 0989 54 | 1 |
| For 5 A C.T. 0-1-5 Flc | 0.1 | 0.4 | 0989 55 | 1 |
| For 5 A C.T. 0-1-6 Flc | 0.1 | 0.4 | 0989 56 | 1 |

Ammeter cards

| Cat. No. | 3 FLC 1 A CT | | 5 FLC 1 A CT | | 6 FLC 1 A CT | |
|----------|-----------------|----------|-----------------|----------|-----------------|----------|
| | graduation | Cat. No. | graduation | Cat. No. | graduation | Cat. No. |
| 098861 | 0 5 15 | 098875 | 0 5 25 | 098889 | 0 5 30 | 098890 |
| 098862 | 0 10 30 | 098876 | 0 10 50 | 098891 | 0 10 60 | 098892 |
| 098863 | 0 15 45 | 098877 | 0 15 75 | 098893 | 0 15 90 | 098894 |
| 098864 | 0 20 60 | 098878 | 0 20 100 | 098895 | 0 20 120 | 098896 |
| 098865 | 0 30 90 | 098879 | 0 30 150 | 098897 | 0 30 180 | 098898 |
| 098866 | 0 40 120 | 098880 | 0 40 200 | 098899 | 0 40 240 | 098900 |
| 098867 | 0 50 150 | 098881 | 0 50 250 | 098901 | 0 50 300 | 098902 |
| 098868 | 0 60 180 | 098882 | 0 60 300 | 098903 | 0 60 360 | 098904 |
| 098869 | 0 75 225 | 098883 | 0 75 375 | 098905 | 0 75 450 | 098906 |
| 098870 | 0 100 300 | 098884 | 0 100 500 | 098907 | 0 100 600 | 098908 |
| 098871 | 0 125 375 | 098885 | 0 125 625 | 098909 | 0 125 750 | 098910 |
| 098872 | 0 150 450 | 098886 | 0 150 750 | 098911 | 0 150 900 | 098912 |
| 098873 | 0 200 600 | 098887 | 0 200 1000 | 098913 | 0 200 1200 | 098914 |
| 098874 | 0 250 750 | 098888 | 0 250 1250 | 098915 | 0 250 1500 | |

| Cat. No. | 3 FLC 5 A CT | | 5 FLC 5 A CT | | 6 FLC 5 A CT | |
|----------|-----------------|----------|-----------------|----------|-----------------|----------|
| | graduation | Cat. No. | graduation | Cat. No. | graduation | Cat. No. |
| 098903 | 0 5 15 | 098917 | 0 5 25 | 098931 | 0 5 30 | 098932 |
| 098904 | 0 10 30 | 098918 | 0 10 50 | 098933 | 0 10 60 | 098934 |
| 098905 | 0 15 45 | 098919 | 0 15 75 | 098935 | 0 15 90 | 098936 |
| 098906 | 0 20 60 | 098920 | 0 20 100 | 098937 | 0 20 120 | 098938 |
| 098907 | 0 30 90 | 098921 | 0 30 150 | 098939 | 0 30 180 | 098940 |
| 098908 | 0 40 120 | 098922 | 0 40 200 | 098941 | 0 40 240 | 098942 |
| 098909 | 0 50 150 | 098923 | 0 50 250 | 098943 | 0 50 300 | 098944 |
| 098910 | 0 60 180 | 098924 | 0 60 300 | | | |
| 098911 | 0 75 225 | 098925 | 0 75 375 | | | |
| 098912 | 0 100 300 | 098926 | 0 100 500 | | | |
| 098913 | 0 125 375 | 098927 | 0 125 625 | | | |
| 098914 | 0 150 450 | 098928 | 0 150 750 | | | |
| 098915 | 0 200 600 | 098929 | 0 200 1000 | | | |
| 098916 | 0 250 750 | 098930 | 0 250 1250 | | | |

| | | | | |
|-------------------------|------|-----|----|----------|
| Zones 1 & 2 - 21 & 22 | ATEX | IEC | UL | II 2 G/D |
| EEx ed IIC or EEx em II | | | | |

TECHNICAL DATA

Zones : 1 and 2 and 21 - 22

Actuators, contact and indicators

- Approved type : AUX
- According to CENELEC : 0081 II2 G/D EEx ed IIC

LCIE: 00 ATEX 0002 U

- According to IEC : Ex ed IIC

LCIE: Ex 00.012 U

- According to UL : AEX e II

UL : E 214068

Operating temperature : - 50°C to + 60°C (ATEX - IEC); - 35°C to + 60°C (UL)

IP66 protection index (for actuators, indicators switch handles)

Contact components :

| | |
|--------------------------------|------------------------------|
| Reference insulation voltage | 690 V |
| Reference operating voltage | 250 V 250 V 110 V 24 V 230 V |
| Category of use | AC 12 AC 15 DC 13 DC 13 |
| Rated operating current | 16 A 10 A 0.5 A 1 A 10 A |
| Rated current I _{the} | 16 A / + 40°C, 11 A / + 60°C |

Contact materials : Ag Sh 02

Number of operations : 10⁶ for the contacts

Operational life : 10⁵ hours for the indicators

Connection to terminals : 2.5 mm²

Operating temperature : - 50°C to + 60°C

• Ammeters :

Zones 1 & 2 and authorised in an approved dustproof enclosure

- Approved type : C 48 D
- According to CENELEC 0081 II2 G EEx em II T6

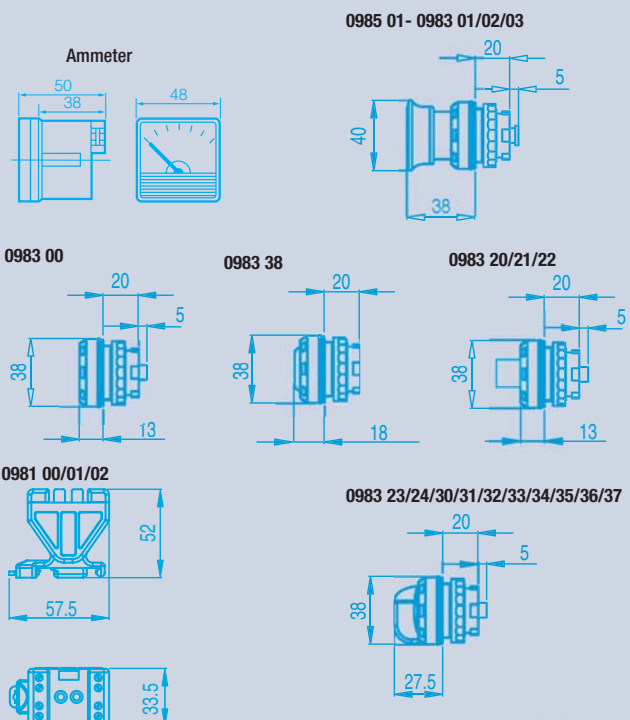
LCIE: 02 ATEX 0006 U

- According to IEC : Ex em II

LCIE: Ex 02.019 U

Operating temperature - 25°C to + 55°C

Dimensions (mm) :



Data sheet available on request

Part number in bold : fast moving references



0982 01



0986 52



0988 31

Indicators, switch handles and contact blocks

- Indicators for mounting at bottom of box on horizontal and vertical rail. **Supplied with coloured lens**

- Multi LED AC 24 V, 48 V, 110 V, 230 V; DC 24 V, 48 V

| | Volume (dm ³) | Cat. No. | Pack |
|------------------|---------------------------|----------------|------|
| Red indicator | 0.10 | 0982 01 | 1 |
| Green indicator | 0.10 | 0982 02 | 1 |
| White indicator | 0.10 | 0982 00 | 1 |
| Yellow indicator | 0.10 | 0982 04 | 1 |
| Blue indicator | 0.10 | 0982 03 | 1 |

Changeover switch for mounting on a vertical and horizontal rail

- Connection via 2 x 2.5 mm² terminals

| | | |
|---|----------------|---|
| Single pole I - II (handle 0986 58 not supplied) | 0986 52 | 1 |
| Single pole with stop I - 0 - II (0986 58 not supplied) | 0986 53 | 1 |

16 A switch for mounting on a vertical and horizontal rail

| | | |
|--|---------|---|
| Double pole I - II (handle 0986 58 not supplied) | 0986 54 | 1 |
|--|---------|---|

Padlockable handle on horizontal or vertical rail for selector switch, changeover switch and 16 A switch

| | | |
|---------------|----------------|---|
| Switch handle | 0986 58 | 1 |
|---------------|----------------|---|

Mounted by rotating handle by 90°

4-pole control and load break switches

(switch handles 0986 47 or 48 not supplied, see diagrams page 183)

| | | |
|---|---------|---|
| Control switch 4 NO - 2 positions | 0988 21 | 1 |
| Control switch 2 NO + 2 NC - 2 positions | 0988 22 | 1 |
| Control switch 1 NC + 3 NO - 2 positions | 0988 23 | 1 |
| Control switch 3 NC + 1 NO - 2 positions | 0988 24 | 1 |
| Control switch 1 NO - 4 positions | 0988 25 | 1 |
| Control switch with 3 positions | 0988 26 | 1 |
| Control switch with 3 positions | 0988 27 | 1 |
| Control switch with 3 positions | 0988 28 | 1 |
| with automatic return from II to I | | |
| Control switch with 3 positions | 0988 29 | 1 |
| with automatic return from II to 0 | | |
| Control switch with 5 positions | 0988 30 | 1 |
| Load break switch 4 NO - 2 positions | 0988 31 | 1 |
| Load break switch 3 NO + 1 NC - 2 positions | 0988 32 | 1 |

Selector switch for 4-pole switch

- Depending on the mounting direction of the DIN rail

| | Horizontal rail | Vertical rail | |
|--|-----------------|----------------|---|
| Selector switch can be used for any of the 4-pole switch functions | 0986 47 | 0986 48 | 1 |

Zones 1 & 2 - 21 & 22

ATEX

IEC

UL

EEx ed IIC

TECHNICAL DATA

- Components conforming to Directive 94/9 EC, standards EN 50014/18/19/28

- Contact and indicating components

Zones : 1 and 2 and 21 - 22

- Approved type : AUX

- According to CENELEC: 0081 II2 G/D EEx ed IIC or EEx e II LCIE: 00 ATEX 0002 U

- According to IEC: Ex ed IIC or Ex e II

LCIE: Ex 00.012 U

- According to UL : AEX ed IIC or AEX e II

UL: E 214068

- Selector switches, changeover switches and 16 A switches

Zones 1 & 2 are authorised in an approved dustproof enclosure

- Approved type : 8008/2

- According to CENELEC: II2 G EEx de IIC T6

PTB 00 ATEX 1111 U

Operating temperature : - 55°C to + 40°C

- 4-pole control and load break switches

Zones 1 & 2 are authorised in an approved dustproof enclosure

- Approved type : 07-3331-1...

- According to CENELEC: II2 G EEx de IIC T6

PTB 99 ATEX 1043 U

Operating temperature - 50°C to + 60°C

- According to UL

UL: E 184198

Operating temperature : - 35°C to + 60°C

- Padlockable handle (0986 58)

- Approved type : AUXe

- 03 ATEX 0012U (CENELEC)

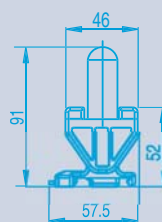
- Ex 03.011U (IEC)

Protection index :

- IP66 (for actuators, indicators units and switch handles)

Dimensions (mm) :

0982 00/01/02/03/04



TECHNICAL DATA

• Indicators

Reference insulation voltage : 300 V
 Reference operating voltage : AC 24 V, 48 V, 110 V, 230 V
 DC 24 V, 48 V

Consumption : ≤ 1 W

Indicators : multi LED

• Single pole and double pole changeover selector switch

Breaking capacity

(according to AC 15/DC 13)

240 V ~6 A 415 V ~5 A 660 V ~2.5 A

380 V ~6 A 500 V ~4 A

• Double pole 16 A switch

Insulation voltage 750 V
 Operating voltage 690 V 415 V
 Maximum current 16 A 16 A
 Category of use AC-1 AC-15

• 4-pole control and load break switches

• Electrical characteristics

Control breaking capacity

Insulation voltage

(auxiliary on/off switch)

| | | | |
|-------------|-------------|-------|------|
| $U_p/660$ V | I_p/AC 15 | 400 V | 10 A |
| $U_p/400$ V | I_p/AC 12 | 400 V | 16 A |
| | I_p/DC 13 | 24 V | 1 A |
| | I_{the} | | 16 A |

• Nominal resistance to overvoltage

$U_{imp}/6$ KV

• Short-circuit current at 400 V

$I_g/4$ KA

Load breaking capacity

DIN EN 60947-3

(main switch, motor control)

• Short-circuit current

(max. power fuse NHgL)

16 A

P/AC 3/AC 23

230 V 3ph/3KW 1ph/2.2KW

400 V 3ph/5.5KW 1ph/3KW

• Rated thermal current

(+ 40°C) $I_{the}/16$ A

(+ 60°C) $I_{the}/11$ A

le/AC 3/AC 23

400 V 11 A

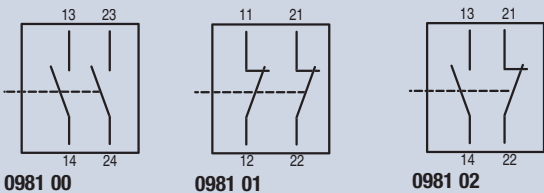
• Ammeter

1 max. 500 V, Fg 25 at 100 Hz, overload 1V In 5 seconds

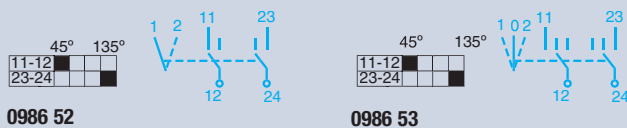
Accuracy class 1.5, consumption 0.7 VA at In,

insulation 3 KV - 50 Hz 1 mn

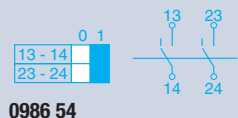
• Connection diagrams for contact components:



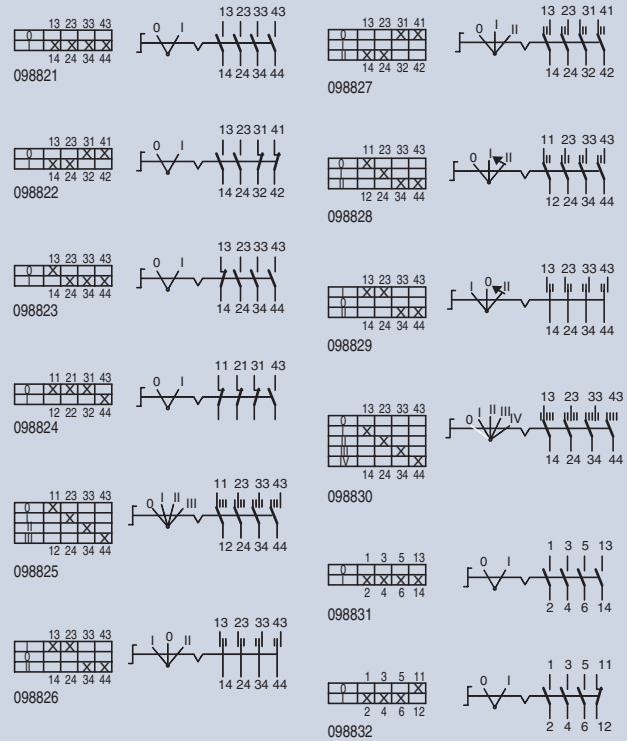
• Connection diagrams for changeover selector switch



• Connection diagrams for 16 A double pole switch

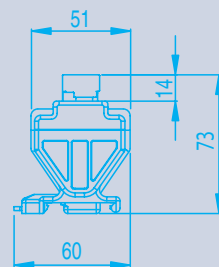


Connection diagrams : 4-pole switches

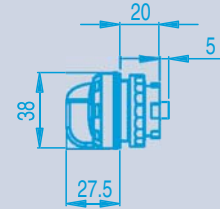


Dimensions (mm) :

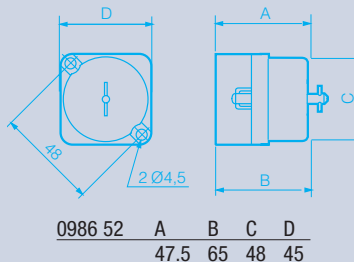
0988 21 to 32



0986 47/48



0986 52/53/54



0986 58

