

## COMPONENTS FOR CONTROL STATIONS IN ALL MATERIALS



0983 00



0983 03



0983 31



0981 02

### TECHNICAL DATA

#### 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 - O - 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

#### 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 <sup>2</sup> 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

## COMPONENTS FOR CONTROL STATIONS IN ALL MATERIALS



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 mm<sup>2</sup> terminals
- For use with current transformers

	Weight (kg)	Volume (dm <sup>3</sup> )	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 graduation	Cat. No.	5 FLC 1 A CT graduation	Cat. No.	6 FLC 1 A CT graduation
098861	0 5 15	098875	0 5 25	098889	0 5 30
098862	0 10 30	098876	0 10 50	098890	0 10 60
098863	0 15 45	098877	0 15 75	098891	0 15 90
098864	0 20 60	098878	0 20 100	098892	0 20 120
098865	0 30 90	098879	0 30 150	098893	0 30 180
098866	0 40 120	098880	0 40 200	098894	0 40 240
098867	0 50 150	098881	0 50 250	098895	0 50 300
098868	0 60 180	098882	0 60 300	098896	0 60 360
098869	0 75 225	098883	0 75 375	098897	0 75 450
098870	0 100 300	098884	0 100 500	098898	0 100 600
098871	0 125 375	098885	0 125 625	098899	0 125 750
098872	0 150 450	098886	0 150 750	098900	0 150 900
098873	0 200 600	098887	0 200 1000	098901	0 200 1200
098874	0 250 750	098888	0 250 1250	098902	0 250 1500

Cat. No.	3 FLC 5 A CT graduation	Cat. No.	5 FLC 5 A CT graduation	Cat. No.	6 FLC 5 A CT graduation
098903	0 5 15	098917	0 5 25	098931	0 5 30
098904	0 10 30	098918	0 10 50	098932	0 10 60
098905	0 15 45	098919	0 15 75	098933	0 15 90
098906	0 20 60	098920	0 20 100	098934	0 20 120
098907	0 30 90	098921	0 30 150	098935	0 30 180
098908	0 40 120	098922	0 40 200	098936	0 40 240
098909	0 50 150	098923	0 50 250	098937	0 50 300
098910	0 60 180	098924	0 60 300	098938	0 60 360
098911	0 75 225	098925	0 75 375	098939	0 75 450
098912	0 100 300	098926	0 100 500	098940	0 100 600
098913	0 125 375	098927	0 125 625	098941	0 125 750
098914	0 150 450	098928	0 150 750	098942	0 150 900
098915	0 200 600	098929	0 200 1000	098943	0 200 1200
098916	0 250 750	098930	0 250 1250	098944	0 250 15FLC

Zone 1 & 2 - 21 & 22	ATEX	IEC	UL	II2 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 Ithe 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 mm<sup>2</sup>

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

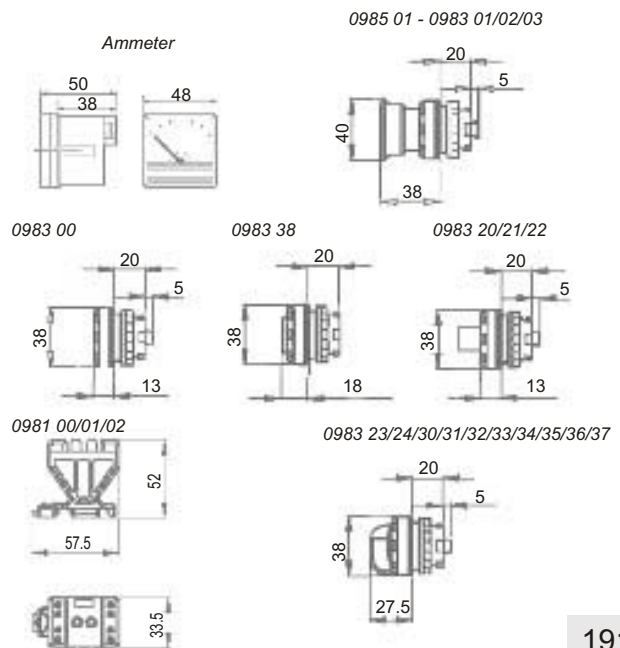
LCIE : 02 ATEX 0006 U

• According to IEC : Ex em II

LCIE : Ex 02.019 U

Operating temperature - 25°C to + 55°C

**Dimensions (mm) :**



## COMPONENTS FOR CONTROL STATIONS IN ALL MATERIALS



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 <sup>3</sup> )	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 mm<sup>2</sup> 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)

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

Switch handle	0986 58	1
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Mounted by rotating handle by 90°

### 4-pole control and load break switches

(switch handles 0986 47 or 48 not supplied, see diagrams page 193)

Control switch 4 NO - 2 positions 0988 21 1	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

Zone 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)

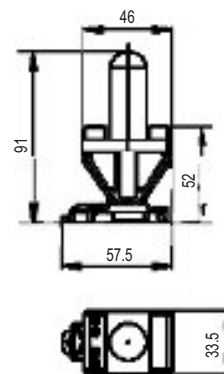
• Ex 03.011U (IEC)

### 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 :  $\leq 1$  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 ~5A 660 V ~2.5 A  
 380 V ~6 A 500 V ~4A

**• 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**  
 (auxiliary on/off switch)  
 Insulation voltage le/AC 15 400 V 10 A  
 U<sub>i</sub>/660 V le/AC 12 400 V 16 A  
 U<sub>e</sub>/400 V le/DC 13 24 V 1 A  
 I<sub>the</sub> 16 A

**• Nominal resistance to overvoltage**

U<sub>imp</sub>/6 KV

**• Short-circuit current**

at 400 V **Load breaking capacity**  
 le/4 KA DIN EN 60947-3  
 (main switch, motor control)

**• Short-circuit current**

(max. power fuse NHgL) **P/AC 3/AC 23**  
 16 A 230 V 3ph/3KW 1ph/2.2KW  
 400 V 3ph/5.5KW 1ph/3KW

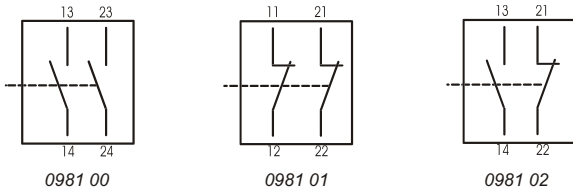
**• Rated thermal current I<sub>e</sub>/AC 3/AC 23**

(+ 40°C) I<sub>the</sub>/16 A 400 V 11A  
 (+ 60°C) I<sub>the</sub>/11A

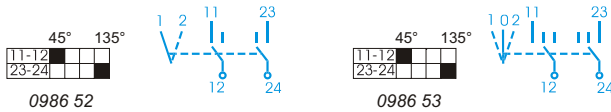
**• Ammeter**

1 max. 500 V, Fg 25 at 100 Hz, overload 1V In 5 seconds  
 Accuracy class 1.5, consumption 0.7 VA at I<sub>n</sub>,  
 insulation 3 KV - 50 Hz 1 mn

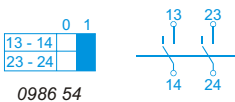
**• Connection diagrams for contact components:**



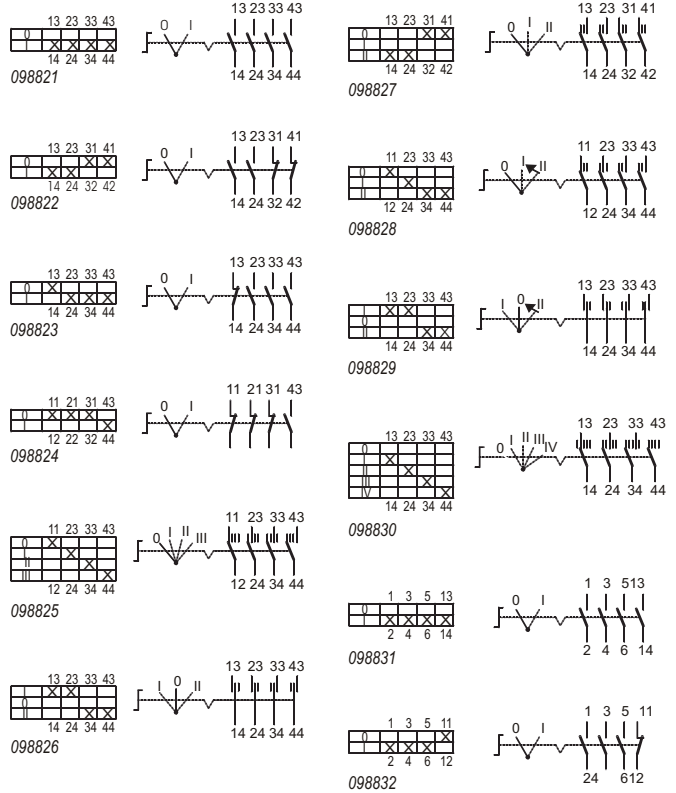
**• Connection diagrams for changeover selector switch:**



**• Connection diagrams for 16 A double pole switch:**

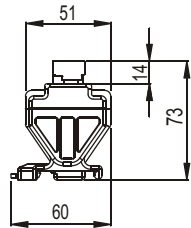


**Connection diagrams: 4 pole switches**

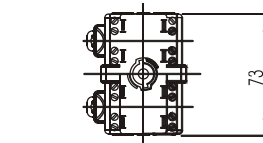
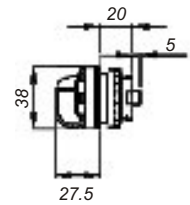


**Dimensions (mm) :**

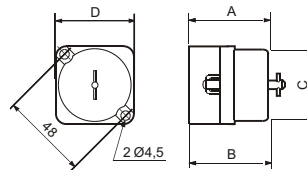
0988 21 to 32



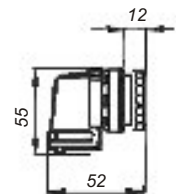
0986 47/48



0986 52/53/54



0986 58



0986 52	A	B	C	D
	47.5	65	48	45