

CC, MSC, CMS

MODULAR FUSE BASES

MODULAR FUSE-LINK BASES FOR CARTRIDGE FUSE-LINKS

Ferraz Shawmut CC, MSC and CMS modular fuse bases accommodate industrial cylindrical fuse-links 8 x 31 mm, 10 x 38 mm, 14 x 51 mm and 22 x 58 mm, North American Class CC and Midget (1-1/2" x 13/32") fuses. They have operating handles for non load-break disconnecting and electrical isolation for fuse-link replacement without tools. All contacts are silver-plated. 2, 3 or 4-pole units can be made up with assembly pins and operating handle ties.



CC Series

- **4 Size Ranges:**
 - CC.8** accepts 8 x 31mm fuse-links
 - CC.10** accepts Class CC, Midget and 10 x 38mm fuse-links
 - CC.14** accepts 30A/250V Class H/K/R & 14 x 51mm fuse-links
 - CC.22** accepts 22 x 58mm fuse-links
- Screw mount or symmetrical DIN rail mount (with adaptor)
- Steel bail handle tie
- Thermoplastic base



MSC Series

- **2 Size Ranges:**
 - MSC.8** accepts 8 x 31mm fuse-links
 - MSC.10** accepts Class CC, Midget and 10 x 38mm fuse-links
- Symmetrical DIN rail mount
- Optional neutral incorporated
- Optional indicator light in 1-pole unit shows open fuse when lit
- Steel pin handle tie
- Thermoplastic base



CMS Series

- **2 Size Ranges:**
 - CMS.14** accepts 30A/250V Class H/K/R & 14 X 51mm fuse-links
 - CMS.22** accepts 22 x 58mm fuse-links
- Optional neutral incorporated
- Optional indicator light shows open fuse when lit
- Optional microswitch on 1-pole & 3-pole
- Thermoplastic base

CC.8, CC.10, CC.14, CC.22

MODULAR FUSE BASES



23002-G



23210-G

CC.8 — 25A, 400VAC, Fits 8mm x 31mm Fuse-links

| POLES | CATALOG NUMBER | | Width (No. of 17.5mm MODULES) |
|--------|----------------|------------|-------------------------------------|
| | SCREW MOUNT | RAIL MOUNT | |
| 1 | 23002-G | 23102-G | 1 |
| N* | 23000-G | 23100-G | 1 |
| 1 + N* | 23010-G | 23110-G | 2 |
| 2 | 23012-G | 23112-G | 2 |
| 3 | 23014-G | 23114-G | 3 |
| 3 + N* | 23018-G | 23118-G | 4 |

* with neutral incorporated

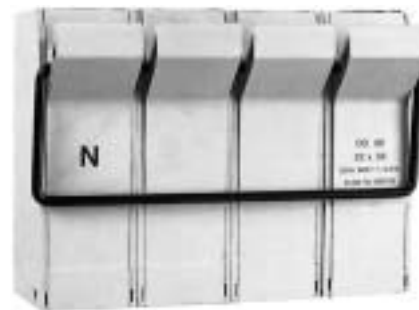
CC.10 — 32A, 690V AC

Fits Class CC, 1-1/2" x 13/32" and 10 x 38mm Fuse-links

| POLES | CATALOG NUMBER | | Width (No. of 17.5mm MODULES) |
|--------|----------------|------------|-------------------------------------|
| | SCREW MOUNT | RAIL MOUNT | |
| 1 | 23202-G | 23302-G | 1 |
| N* | 23200-G | 23300-G | 1 |
| 1 + N* | 23210-G | 23310-G | 2 |
| 2 | 23212-G | 23312-G | 2 |
| 3 | 23214-G | 23314-G | 3 |
| 3 + N* | 23218-G | 23318-G | 4 |



23414-G



23618-G

CC.14 — 50A, 690VAC

Fits 30A, 250V Class H, K, R and 14 x 51mm Fuse-links

| POLES | CATALOG NUMBER | | Width (No. of 17.5mm MODULES) |
|--------|----------------|------------|-------------------------------------|
| | SCREW MOUNT | RAIL MOUNT | |
| 1 | 23402-G | 23502-G | 1.5 |
| N* | 23400-G | 23500-G | 1.5 |
| 1 + N* | 23410-G | 23510-G | 3 |
| 2 | 23412-G | 23512-G | 3 |
| 3 | 23414-G | 23514-G | 4.5 |
| 3 + N* | 23418-G | 23518-G | 6 |

* with neutral incorporated

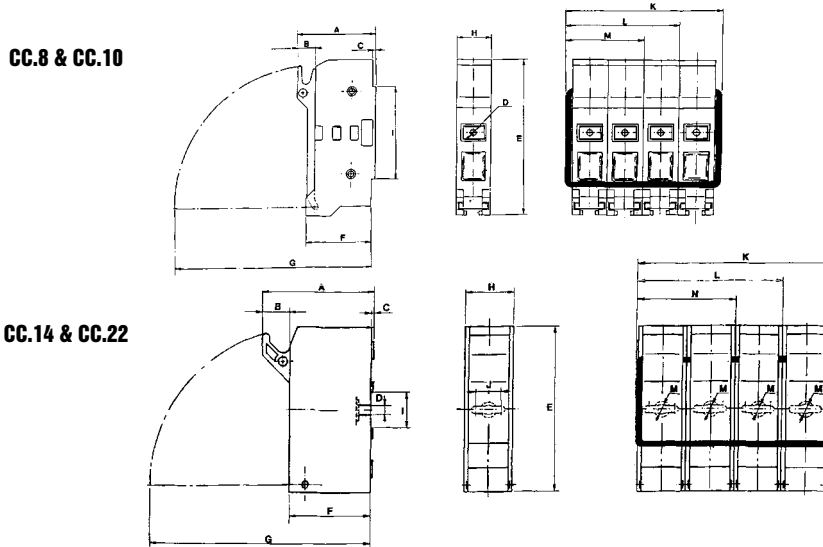
CC.22 — 125A, 690VAC, Fits 22 x 58mm Fuse-links

| POLES | CATALOG NUMBER | | Width (No. of 17.5mm MODULES) |
|--------|----------------|------------|-------------------------------------|
| | SCREW MOUNT | RAIL MOUNT | |
| 1 | 23602-G | 23702-G | 2 |
| N* | 23600-G | 23700-G | 2 |
| 1 + N* | 23610-G | 23710-G | 4 |
| 2 | 23612-G | 23712-G | 4 |
| 3 | 23614-G | 23714-G | 6 |
| 3 + N* | 23618-G | 23718-G | 8 |



CC.8, CC.10, CC.14, CC.22

MODULAR FUSE BASES



Dimensions

| | A | B | C | D | E | F | G | H | I | K | L | M |
|--------------|--------------|------------|-------------|--------------|----------------|--------------|---------------|----------------|--------------|--------------|--------------|----------------|
| CC.8 & CC.10 | 40 (1.58) | 9 (.35) | 2 (.079) | 5.5 (.22) | 77.5 (3.05) | 33 (1.30) | 100 (3.94) | 17.5 (.069) | 46 (1.81) | 35 (1.38) | 60 (2.36) | 42.5 (1.67) |

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|-------|--------------|---------------|-------------|----------------|---------------|----------------|---------------|--------------|----------------|---------------|---------------|---------------|------------|--------------|
| CC.14 | 62 (2.44) | 15.5 (.61) | 1 (.04) | 7.25 (.29) | 94 (3.70) | 45.5 (1.79) | 127 (5.00) | 27 (1.06) | 20.3 (.80) | 15.2 (.60) | 112 (4.41) | 85 (3.35) | 6 (.24) | 58 (2.29) |
| CC.22 | 71 (2.80) | 16 (0.63) | 1 (0.04) | 7.25 (0.29) | 106 (4.17) | 55 (2.17) | 148 (5.83) | 34 (1.34) | 20.3 (0.80) | 18 (0.71) | 139 (5.47) | 105 (4.14) | 6 (.24) | 71 (2.80) |

Accessories

| | POLES | CC.8 CATALOG NO. | CC.10 CATALOG NO. | CC.14 CATALOG NO. | CC.22 CATALOG NO. | STANDARD PACK |
|-----------------------------|-------|---------------------|----------------------|----------------------|----------------------|------------------|
| HANDLE TIE | 2 | 23934-G | 23934-G | 23941-G | 23948-G | 10 |
| | 3 | 23935-G | 23935-G | 23942-G | 23949-G | 10 |
| | 4 | 23936-G | 23936-G | 23943-G | 23950-G | 10 |
| SYMMETRICAL RAIL ADAPTOR | | 23937-G | 23937-G | 23951-G | 23951-G | 10 |



Handle Tie
23936-G

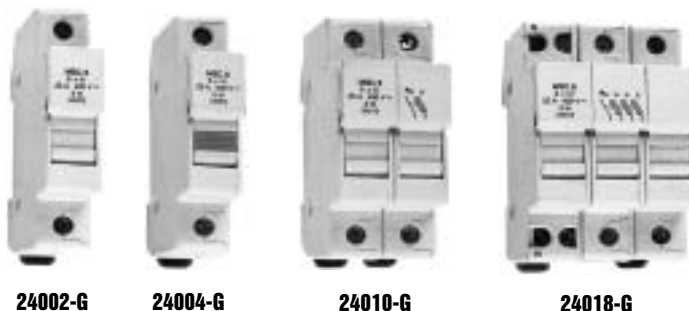


Symmetrical Rail Adaptor
23937-G

MSC.8, MSC.10

MSC.8 — 25A, 400VAC, Fits 8 X 31mm Fuse-links

| CATALOG POLES | No. of NUMBER | Width (No. of 17.5mm MODULES) | PACK |
|---------------|---------------|-------------------------------|------|
| 1 | 24002-G | 1 | 12 |
| 1 + N* | 24006-G | 1 | 12 |
| 1 + N* | 24010-G | 2 | 6 |
| 2 | 24012-G | 2 | 6 |
| 3 | 24014-G | 3 | 4 |
| 3 + N* | 24018-G | 3 | 4 |
| 3 + N* | 24016-G | 4 | 3 |
| 4 | 24019-G | 4 | 3 |
| N* | 24000-G | 1 | 12 |



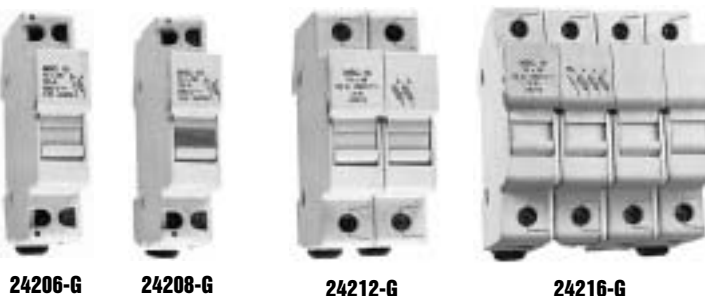
With Built-in Indicator Light

| | | | |
|--------|---------|---|----|
| 1 | 24004-G | 1 | 12 |
| 1 + N* | 24008-G | 1 | 12 |

* with neutral incorporated

MSC.10 — 32A, 690VAC, Fits Class CC, 1-1/2" x 13/32" and 10 x 38mm Fuse-links

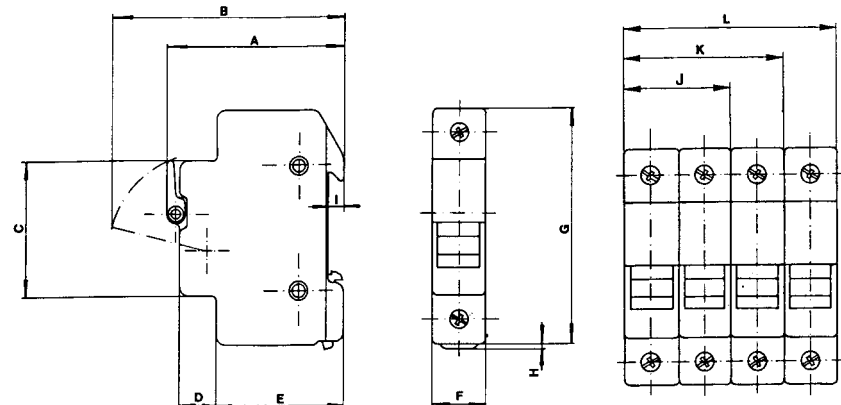
| POLES | CATALOG NUMBER | Width (No. of 17.5mm MODULES) | STANDARD PACK |
|--------|----------------|-------------------------------|---------------|
| 1 | 24202-G | 1 | 12 |
| 1 + N* | 24206-G | 1 | 12 |
| 1 + N* | 24210-G | 2 | 6 |
| 2 | 24212-G | 2 | 6 |
| 3 | 24214-G | 3 | 4 |
| 3 + N* | 24218-G | 3 | 4 |
| 3 + N* | 24216-G | 4 | 3 |
| 4 | 24219-G | 4 | 3 |
| N* | 24200-G | 1 | 12 |



With Built-in Indicator Light

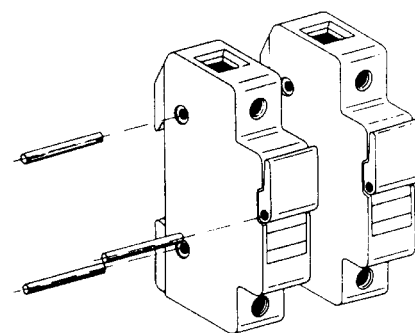
| | | | |
|--------|---------|---|----|
| 1 | 24204-G | 1 | 12 |
| 1 + N* | 24208-G | 1 | 12 |

* with neutral incorporated



Dimensions — mm (Inches)

| A | B | C | D | E | F | G | H | J | K | L |
|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|
| 59 | 78 | 45 | 12.5 | 42.5 | 17.5 | 78 | 2.5 | 35 | 52.5 | 70 |
| (2.32) | (3.07) | (1.77) | (.49) | (1.67) | (.69) | (3.07) | (.098) | (1.38) | (2.07) | (2.76) |



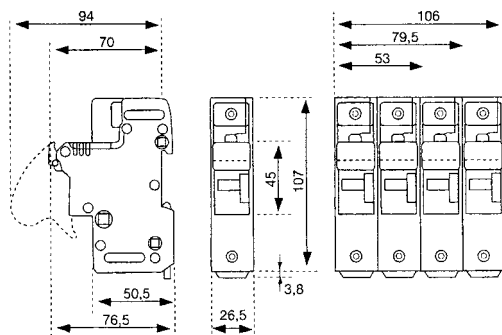
Assembly Pins

| No. of POLES | CATALOG NUMBER | STANDARD PACKAGE |
|--------------|----------------|------------------|
| 2 | 14030-G | 10 |
| 3 | 14031-G | 10 |
| 4 | 14032-G | 10 |



CMS.14

MODULAR FUSE BASES



- Indicator for fuse melts and/or stricker (120/690V)
- Clip for rail mounting in two positions
- Cable size max. 35 mm²
- Provision for locking
- IP 20

CMS 14: Holder for 14x51 Fuse

In max: 50A; Vn max: 690V

| POLES | CATALOG NUMBER | | | | In MAX | | | Torque | No. of 17.5mm Modules | Packaging |
|-------|----------------|-------------|---------------|--------------|--------|------|------|---------|-----------------------|-----------|
| | Standard | + indicator | + Microswitch | Micro + Ind. | 400V | 500V | 690V | Max N-m | | |
| N | 29000-G | | | | | | | | 1,5 | 6 |
| 1 | 29002-G | 29004-G | 29020-G | 29120-G | | | | | 1,5 | 6 |
| 1+N | 29010-G | 29011-G | | | | | | | 3 | 3 |
| 2 | 29012-G | 29013-G | 29021-G | 29121-G | 50A | 32A | 25A | 3.5 | 3 | 3 |
| 3 | 29014-G | 29015-G | 29024-G | 29124-G | | | | | 4,5 | 2 |
| 3* | | | 29025-G* | 29125-G* | | | | | 6 | 1 |
| 3+N | 29016-G | 29017-G | 29026-G | 29126-G | | | | | 6 | 1 |
| 4 | 29019-G | | | | | | | | 6 | 1 |

*2 microswitches

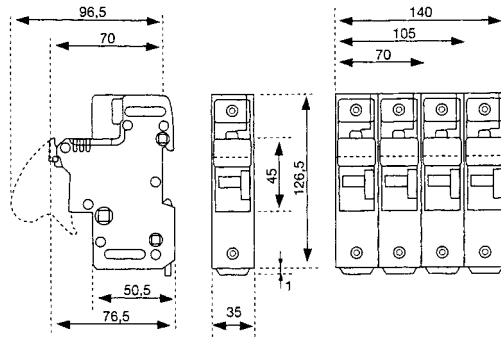
Accessories(***)

| Description | CATALOG NUMBER | No. of 17.5mm Modules | Packaging |
|---------------------------|----------------|-----------------------|-----------|
| Micro Kit 1P | 29051-G | 1,5 | 1 |
| Micro Block 3P | 29052-G | 4,5 | 1 |
| Block 2 Micro 3P | 29053-G | 4,5 | 1 |
| Fuse holder assembly pins | 29050-G | | 10 |
| Lock | 29057-G | | 1 |

(***) See technical features for mounting information

CMS.22

MODULAR FUSE BASES



- Indicator for fuse melts and/or stricker (120/690V)
- Clip for rail mounting in two positions
- Cable size max. 50 mm²
- Provision for locking
- IP 20

CMS 22: Holder for 22x58 Fuse

In max: 125A; Vn max: 690V

| POLES | CATALOG NUMBER | | | | In MAX | | | Torque | No. of 17.5mm Modules | Packaging |
|-------|----------------|-------------|---------------|--------------|--------|------|------|---------|-----------------------|-----------|
| | Standard | + indicator | + Microswitch | Micro + Ind. | 400V | 500V | 690V | Max N-m | | |
| N | 29200-G | | | | | | | | 1,5 | 6 |
| 1 | 29202-G | 29204-G | 29220-G | 29320-G | | | | | 1,5 | 6 |
| 1+N | 29210-G | 29211-G | | | | | | | 3 | 3 |
| 2 | 29212-G | 29213-G | 29221-G | 29321-G | 125A | 100A | 80A | 4.5 | 3 | 3 |
| 3 | 29214-G | 29215-G | 29224-G | 29324-G | | | | | 4,5 | 2 |
| 3* | | | 29225-G* | 29325-G* | | | | | 6 | 1 |
| 3+N | 29216-G | 29217-G | 29226-G | 29326-G | | | | | 6 | 1 |
| 4 | 29219-G | | | | | | | | 6 | 1 |

*2 microswitches

Accessories(***)

| Description | CATALOG NUMBER | No. of 17.5mm Modules | Packaging |
|---------------------------|----------------|-----------------------|-----------|
| Micro Kit 1P | 29251-G | 1,5 | 1 |
| Micro Block 3P | 29252-G | 4,5 | 1 |
| Block 2 Micro 3P | 29253-G | 4,5 | 1 |
| Fuse holder assembly pins | 29250-G | | 10 |
| Lock | 29057-G | | 1 |

(***) See technical features for mounting information



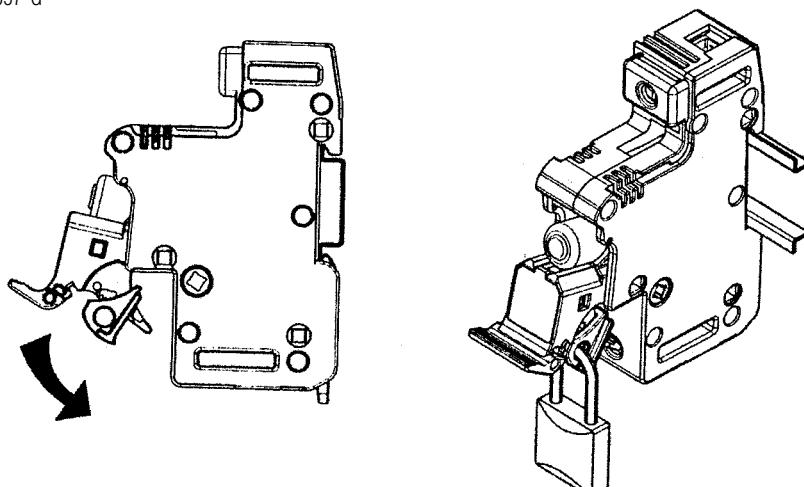
CMS

MODULAR FUSE BASES

Table of electrical characteristics

| | Rating Un(V) | Uimp | Fuse Current rating In(A) | Maimum fuse operating current (A) | | | | Recom- mended copper wire size (mm2) | Max Torque N-m | |
|--------|-----------------|------|------------------------------------|---|------|-----|----|--|----------------------|----|
| | | | | gG | aM | gRC | UR | | | |
| CMS 14 | 690 | 8 | 0,25 | 0,25 | 0,25 | | | | 3,5 | |
| | | | 0,5 | | | | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 4 | | | | | | | |
| | | | 6 | | | | | | | |
| | | | 8 | | | | | | | |
| | | | 10 | | | | 10 | 10 | | |
| | | | 12 | | | | 12 | 12 | | |
| | | | 16 | | | | 16 | 16 | | |
| 20 | | 20 | 20 | 2,5 | | | | | | |
| 25 | | 25 | 20 | 2,5 | | | | | | |
| 32 | | 32 | 25 | 4 | | | | | | |
| 40 | | 40 | 30 | 6 | | | | | | |
| 50 | 40 | 50 | 38 | 35 | 6 | | | | | |
| | | | | | | 10 | | | | |
| CMS 22 | 690 | 8 | 0,25 | ↓ | 1 | | | | 4 | |
| | | | 0,5 | | | | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 4 | | | | | | | |
| | | | 6 | | | | | | | |
| | | | 8 | | | | | | | |
| | | | 10 | | | | 20 | 20 | | 4 |
| | | | 12 | | | | 25 | 25 | | 6 |
| | | | 16 | | | | 32 | 42 | | 10 |
| | | | 20 | | | | 40 | 40 | | 10 |
| | | | 25 | | | | 50 | 50 | | 10 |
| | | | 32 | | | | 51 | 63 | | 16 |
| | | | 40 | | | | 64 | 60 | | 25 |
| | | | 50 | | | 100 | 74 | 70 | | 35 |
| | | | | | | | | | | 35 |

Lock installation
Padlock Catalog Number 29057-G

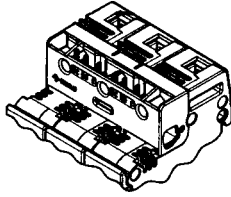


CMS

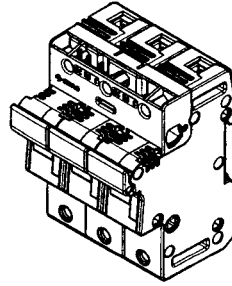
MODULAR FUSE BASES

Microswitch options

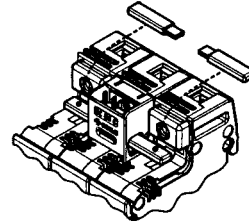
2 microswitches



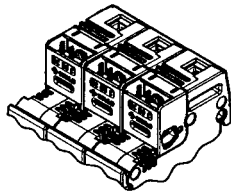
1 microswitch



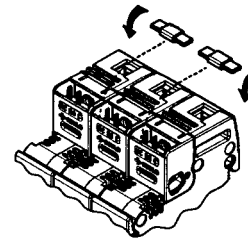
1 microswitch



3 independent microswitches

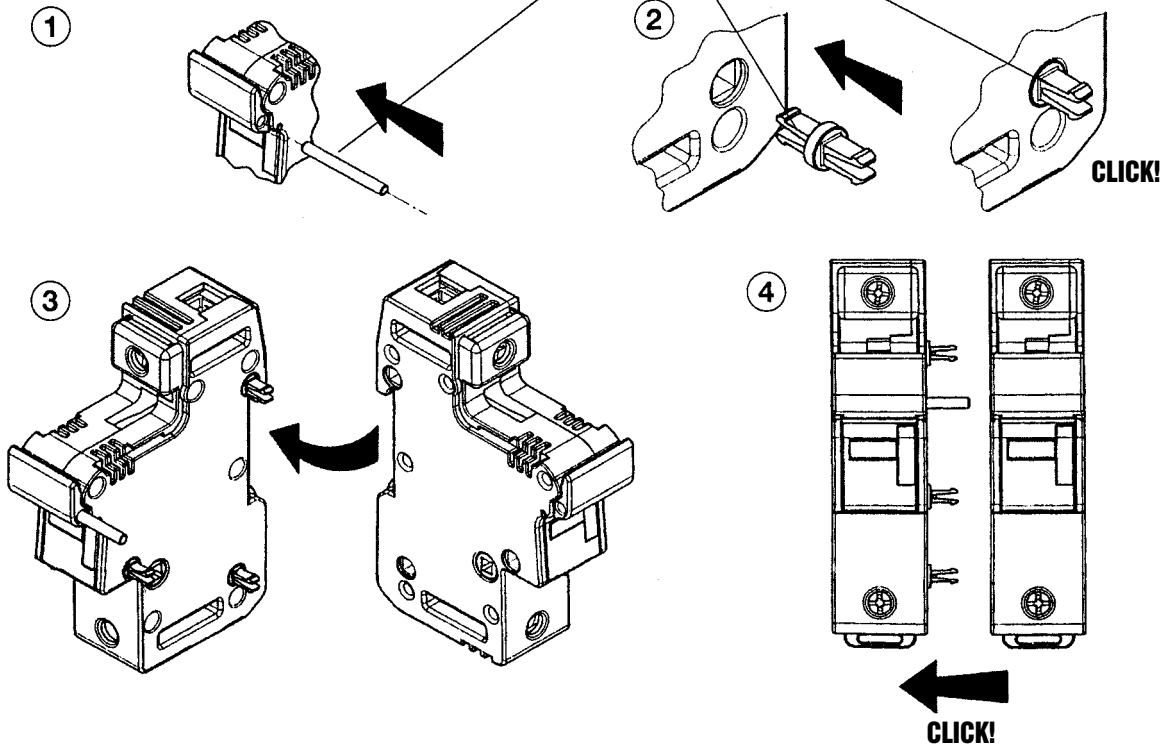


3 mechanically interconnected microswitches



Fuse holder assembly

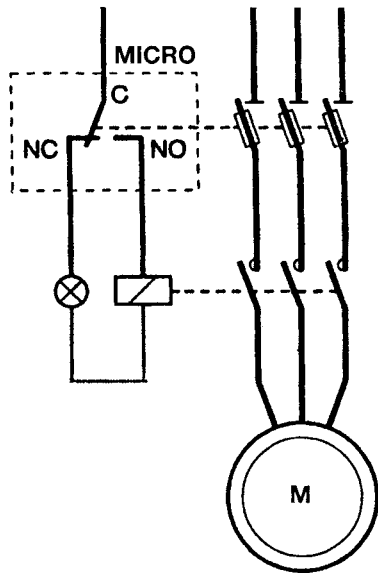
CMS14 Cat. No. 29050-G
CMS22 Cat. No. 29250-G



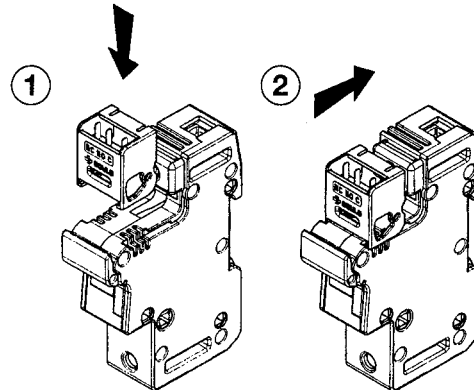
CMS

MODULAR FUSE BASES

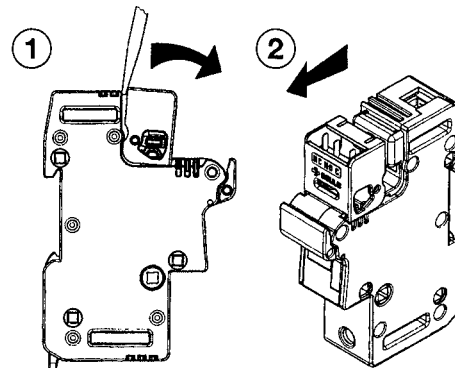
Microswitch mounting instructions(*)



Assembly



Disassembly



Auxilliary microswitch characteristics

(*) Microswitch functions

| | | | | |
|---------------------|--|---|--------------------------|------------------------------------|
| Blown fuse: | Fuse holder containing fuse with striker sends message when fuse blown | Nominal current and interrupting rating(1) at 250V | 6A 3A 0,3A 0,1A | AC12 AC13 AC14 DC12/13/14 |
| Prebreaking: | When fuse holder opens | Nominal current and interrupting rating(1) at 12 V and 24 V | 6A 5A | DC12/DC13 AC13 |
| Presence: | Sends message or not depending on fuse presence | | 2A 0,6A | AC14/DC13 DC14 |

(1) According IEC947-5 Standard