## - Ill orato electric

## NEW PRODUCT LAUNCH



## 16-125A in AC21

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## Note.

The products illustrated in this publication are subject to be revised or improved at any moment. Catalogue description, technical and operational data as well as other details therein specified do not have any contractual value so must be considered only as indication. The products should be installed and used by qualified personnel and in compliance with regulations in force for electrical systems in order to avoid damages and safety hazards.

## 1. INTRODUCTION

Lovato Electric announces the release of the new GA series of switch disconnectors with current ratings ranging from 16 to 125A in AC21 utilisation category.

The new series has been designed and developed to easily and completely replace the previous GS types, focusing to be more competitive on the market and providing, at the same time, better product performance. With the range of accessories and versions far more extended than the previous GS types, new fields of business can now be approached, such as switching systems and photovoltaic applications.

The new GA series have the following electrical ratings in AC21 at 690V: 16, 25, 32, 40, $63,80,100$ and 125A. These new disconnectors satisfy the specifications of low-voltage systems, according to IEC/EN 60947-3. They can be mounted on plates with screws, snapped on 35 mm DIN rail or on a panel door using screws or snap on fixing. All the GA...A disconnectors, with rear plate mounting, are suitable for modular consumer panels with 45 mm opening. The accessories are snap fitted in place and have enhanced modularity.

It is important to highlight the handle indicates in a reliable and distinct way the contact position: in case of contact welding, the handle cannot be returned to OFF position but it stops in a intermediate position maintaining the door coupling. Interlock.

Among the factors which highlight the new series, the following are the most important:

- Ease of installation
- High electrical capabilities
- UL and KEMA certification
- Improved industrial design
- Extension of the device and accessory range.

The main applications of the switch disconnectors include:

- Distribution switchboards
- Electric panels on board machinery
- Automatic line switching
- Switchboards for pumps
- Power factor correction switchboards
- Protection and control panels for photovoltaic applications.



## 2. RANGE AND CHARACTERISTICS

The range of new 16-125A switch disconnectors is divided into two versions:

## 1. Rear-mount switch disconnectors with direct operation or door coupling

The new GA...A switch disconnectors are available in a rear-mount direct operating version with 16 to 125A AC21 current ratings.

The switch is standard supplied with a direct operating handle but can be transformed into a door-coupling version by separately purchasing an extension and handle.

16-40 A


63-125A


The three-pole switches with AC21 16 to 40A current ratings are made with a body, merely 36 mm wide, while the 63 to 125A types, 70 mm wide.

The supply includes GA...A switch disconnectors designed for the most common uses and the GA...D types for small-rated residential photovoltaic systems or for systems with large numbers of strings (use up to 800V in DC21B category).

## Main features are listed below:

- Standard supplied with direct handle operation
- Door-coupling operation can be done by simply purchasing an extension and external handle
- Screw or 35mm DIN rail fixing of the switch disconnector
- Screw fixing of size 1 switches - 16 to 40A - compatible with previous GS series
- Screw fixing of size 2 switches - 63 to 125A - compatible with previous GS series and with ABB OT16... 125 series
- Rated insulation voltage Ui: 800 V ;
- On-board handle padlockable in "0" position
- IP65 door-coupling handle, lockable with 3 padlocks in " 0 " position
- Suitable for mounting in modular consumer panels
- UL508 / CSA 22.2 n ${ }^{\circ} 14$ certification for GA 16-40A ratings
- UL98 / CSA $22.2 n^{\circ} 4$ certification for GA 63-125A ratings
- KEMA certification for GA16-125A ratings
- Dual breaking contacts with direct opening operation
- Wide array of accessories including various types of handles, extensions for door coupling, auxiliary contacts and terminals covers
- Photovoltaic version GA...D available.


## 2. Door-mount switch disconnectors

The new GA...C switch disconnectors are available in a door-mount version with 16 to 125A AC21 current ratings.

The switch is standard supplied with an extension fitted on the body while the terminals are accessible on the rear.


36 mm

63-125A


70 mm

The switches with AC21 current ratings of 16 to 40 A are made with a body merely 36 mm wide while the 63 to 125 A 70 mm wide.

## The following are the main features:

- Standard-supplied with the extension fitted on the switch body
- Snap-On fixing for size 1 switches - 16 to 40A - when used with GAX63 and GAX63B handles, otherwise by screw
- Rated insulation voltage Ui: 800 V ;
- IP65 handles, lockable with 3 padlocks in "0" position
- UL508 / CSA 22.2 n ${ }^{\circ} 14$ certification for GA 16-40A
- UL98 / CSA $22.2 \mathrm{n}^{\circ} 4$ certification for GA 63-125A
- KEMA certification for GA16-125A
- Terminal accessibility from rear, internal panel door
- Dual breaking contacts with direct opening operation
- Wide array of accessories including various types of handles, auxiliary contacts and terminal covers.


## ACCESSORIES

In addition, a complete range of accessories is available and includes:

- Different types of handles
- Fourth pole with simultaneous closing operation as switch poles
- Fourth pole with early-make closing operation with respect to switch poles


## LOVATO ELECTRIC SPA - SWITCH DISCONNECTORS 16-125A in AC21A

- Earth terminal
- Neutral terminal
- Auxiliary contacts
- Shaft extensions for door coupling;
- Terminal covers
- Mechanical interlock for line changeover
- Mechanical coupling system for 6-8 pole switch disconnectors
- Fuse holder for size 1 switches - GA016A-GA023A -
- Empty enclosures for switch disconnectors.


## DOOR-COUPLING HANDLES AND SHAFT EXTENSIONS

## GAX61



- Reduced thickness - mere 23 mm
- Can be used with 16-125A switches, rear or door mount types
- "Traditional" padlockable handle
- Lockable with 3 padlocks in "0-OFF" position
- Fixing interaxis $\square 28-32 \times 28-32 \mathrm{~mm}$ and $\square 36 x 36 \mathrm{~mm}$
- IP65 degree of protection
- Screw fixing of handle from the front - last operation to complete is fixing the red handle with its screw
- Black/gray version available - GAX61B.


## GAX62



- Can be used with 16-125A switches, rear or door mount types
- Padlockable selector- type handle
- Lockable with 3 padlocks in "0-OFF" position
- Fixing interaxis $\square 48 \times 48 \mathrm{~mm}$ and $\square 36 \times 36 \mathrm{~mm}$
- IP65 degree of protection
- Screw fixing of handle from the front, by the removable front plate
- Black/gray version available - GAX62B.

GAX63


- Can be used with 16-125A rear-mount switches, and 16-40A door-mount types
- Padlockable selector- type handle
- Lockable with 3 padlocks in "0-OFF" position
- IP65 degree of protection
- Ring fixing through 22 mm drilled hole
- Black/gray version available - GAX63.

GAX64


## GAX65



GAX66


## GAX67B



- Can be used with 16-125A rear-mount switches
- Padlockable selector- type handle
- Lockable with 3 padlocks in "0-OFF" position
- IP65 degree of protection
- Ring fixing through 22 mm drilled hole
- Defeatable release per UL508A in "I-ON" position using relative tool
- Automatic operation reset at door closing
- Black/gray version available - GAX64B.
- Can be used with 16-125A rear-mount switches
- Padlockable pistol grip handle
- Lockable with 3 padlocks in "O-OFF" position
- IP65 degree of protection
- Screw fixing of handle from inside door panel
- Black/gray version available - GAX65B.
- Can be used with 16-125A rear-mount switches
- Padlockable pistol grip handle
- Lockable with 3 padlocks in "0-OFF" position
- IP65 degree of protection
- Screw fixing of handle from inside door panel
- Defeatable release per UL508A in "I-ON" position using relative tool
- Automatic operation reset at door closing
- Black/gray version available - GAX66B.
- Reduced thickness, mere 23 mm
- Can be used with mechanical interlock GAX50...(I-0-II)
- "Traditional" padlockable handle
- Lockable with 3 padlocks in "0-OFF" position
- Fixing interaxis $\square 28-32 \times 28-32 \mathrm{~mm}$ and $\square 36 \times 36 \mathrm{~mm}$
- IP65 degree of protection
- Screw fixing of handle from the front - last operation to complete is fixing the red handle with its screw.


## Handle mounting for switch disconnectors:

## REAR MOUNT



DOOR MOUNT


Take into consideration, when using the screw fixing handles GAX61 and GAX62, the black underplate must be used with rear-mount switches only and not with the door-mount types since the screw fixing is done directly on the switch front.

GAX61 $\Rightarrow$ Used with GA...A, GA...C and GA...D versions
GAX62 $\Rightarrow$ Used with GA...A, GA...C and GA $\qquad$ versions

GAX63 $\Rightarrow$ Used with GA...A, GA...C (16-40A types only) and GA...D versions
GAX64 $\Rightarrow$ Used with GA...A and GA...D versions
GAX65 $\Rightarrow$ Used with GA...A and GA...D versions
GAX66 $\Rightarrow$ Used with GA...A and GA...D versions
GAX67B $\Rightarrow$ Used with GAX5000 and GAX5001 interlocks.

## FOURTH POLE

For 16-40 A switches


12 mm

For 63-125 A switches


23 mm

To obtain a four-pole switch disconnector, Lovato Electric has the following accessories available:

- Fourth pole with simultaneous closing as switch poles for rear-mount GA016-040A A single type is available to use with 16-40A AC21 ratings of rear-mount GA...A types.
- Fourth pole with simultaneous closing as switch poles for door-mount GA016-040C A single type is available to use with 16-40A AC21 ratings of door-mount GA...C types.
- Fourth pole with simultaneous closing as switch poles for rear-mount GA063-125A There are 4 types available to use with 63-125A AC21 ratings (based on Ith) of rearmount GA...C types.
- Fourth pole with simultaneous closing as switch poles for door-mount GA063-125C There are 4 types available to use with 63-125A AC21 ratings (based on Ith) of doormount GA...C types.
- Fourth pole with early-make closing with respect to switch poles for rear-mount GA016-040A
A single type is available to use with 16-40A AC21 ratings of rear-mount GA...A types.
- Fourth pole with early-make closing with respect to switch poles for door-mount GA016-040C
A single type is available to use with 16-40A AC21 ratings of door-mount GA...C types.
- Fourth pole with early-made closing with respect to switch poles for rear-mount GA063-125A
A single type is available to use with 62-125A AC21 ratings of rear-mount GA...A types.
- Fourth pole with early-made closing with respect to switch poles for door-mount GA063-125C
A single type is available to use with 62-125A AC21 ratings of door-mount GA...C types.

Bear in mind three-pole switch disconnectors for photovoltaic duty require special GAX42...D fourth poles. They are specifically designed to warrant performance in DC21B duty and necessary in this application field since the pole is then connected in series with the switch poles.

Main features of these new fourth poles are as follows:

- Quick fixing on switch side with no need of tools
- Fitting on either side of the switch disconnector but only one piece per switch
- Possible coupling with other accessories, such as auxiliary contacts, earth and neutral terminals.


## EARTH AND NEUTRAL TERMINALS

For 16-40 A switches


For 63-125 A switches


23 mm

LOVATO Electric has available the following earth (ground) and neutral terminals for the new GA switch disconnectors with the eventual fourth pole:

- Earth and neutral terminals for 16-40A rear-mount types

There are 2 part numbers available for the neutral and earth / ground terminals selected according to the related rear-mount 16-40A AC21 switch ratings (GA...A).

- Earth and neutral terminals for 16-40A door-mount types

There are 2 part numbers available for the neutral and earth / ground terminals selected according to the related door-mount 16-40A AC21 switch ratings (GA...C).

- Earth and neutral terminals for 63-125A rear-mount types

There are 2 part numbers available for the neutral and earth / ground terminals selected according to the related rear-mount 63-125A AC21 switch ratings (GA...A).

- Earth and neutral terminals for 63-125A door-mount types

There are 2 part numbers available for the neutral and earth / ground terminals selected according to the related door-mount 63-125A AC21 switch ratings (GA...C).

The main features of these accessories are:

- Snap-on fixing to the fourth pole and/or auxiliary contacts, if any; otherwise directly on the side of the switch disconnector, with no need of tools
- Fitting on either side of the switch disconnectors
- Can also be used with other accessories, such as fourth pole, auxiliary contacts.


## AUXILIARY CONTACTS

For 16-125A switches


9 mm
LOVATO Electric has available the following auxiliary contacts mountable on the side of the new GA switch disconnectors with the eventual fourth pole:

- 1NO+1NC auxiliary contacts for rear-mount switch disconnectors GA16...125A / GA40...125D: One only type is available for all rear-mount types.
- 1NO+1NC auxiliary contacts for door-mount switch disconnectors GA16...125C: One only type is available for all door-mount types.

The main features of these accessories are:

- Reduced dimensions: mere 9 mm wide
- One only contact block for all the switch ratings for each type of mounting
- Snap-on fixing to the fourth pole, if any; otherwise directly on the switch disconnector side, with no need of tools
- Fitting on either side of the switch disconnector
- Canso also be used with other accessories, such as fourth pole, earth terminal and neutral terminal.


## COMBINATIONS

Up to 4 auxiliary contacts or a fourth pole and 3 contacts can be mounted; only a maximum of two blocks on right and two on the left of each switch disconnector. In addition, an earth and/or neutral terminal and fuse holder can also be added.


## SHAFT EXTENSIONS FOR DOOR COUPLING HANDLES

LOVATO Electric has available the following shaft extensions for door-coupling handles to be used with the new rear-mount GA switch disconnectors:

- 55 mm long
- 70 mm long
- 90 mm long
- 150 mm long
- 200 mm long
- 300 mm long.



## TERMINAL COVERS

To warrant the best protection to the terminals of the new GA switch disconnectors, LOVATO Electric offers the following terminal covers:

- Single-pole terminal cover for GAX42/41040...fourth pole (16-40A) Fixing is snap on to the fourth pole of 16 to 40A switch disconnectors, rear and door mount versions
- Single-pole terminal cover for GAX42/41063-125... fourth pole (63-125A) Fixing is snap on to the fourth pole of 63 to 125A switch disconnectors, rear and door mount versions

- Three-pole terminal cover for 16-40A switch disconnectors

Fixing is snap on to 16-40A switch disconnector terminals, rear and door mount versions

- Three-pole terminal cover for 63-125A switch disconnectors

Fixing is snap on to 63-125A switch disconnector terminals, rear and door mount versions


All types have an opening on each pole front to permit the use of tester probes, without having to remover the covers.

## SWITCH DISCONNECTORS IN HOUSING

LOVATO Electric has available three-pole switch disconnectors in housing with 16 to 125A AC21 electrical ratings.


For 16-40 A switches


For 63-125 A switches

There are two different sizes of enclosures: the first for switch disconnectors with 16-40A AC21 current ratings while the second for $63-125 A$. They are made of plastic and are
available either as empty or complete with switch disconnectors; in any case both have external padlockable handle of black or red/yellow colour along with shaft extension.

Main enclosure features include:

- Four-pole version can be obtained by adding the fourth pole
- Combinations for 16-40A enclosure: one add-on block on the switch right and left side
- Combinations for 63-125A enclosure: two add-on block on the switch right and left side
- Padlockable handles
- Sealable covers
- IP65 degree of protection
- UL certified types available; add UL suffix to the part number (NEMA rating 4X)
- Cable entry by knockouts PG16/M25 and PG13.5/M20 for 16-40A enclosure
- Smooth surfaces to be drilled by customer for 63-125A enclosure
- Door coupling with switch disconnector in ON position
- Earth and neutral metal terminals standard supplied with 16-40A enclosure types.


## MECHANICAL COUPLING SYSTEM FOR 6-8 POLE SWITCH DISCONNECTORS



- Can be used with rear-mount switch disconnectors
- Standard supplied direct operating control
- Padlockable direct operating handle
- Door-coupling control can be obtained by purchasing a shaft extension and handle.


## MECHANICAL INTERLOCK FOR LINE CHANGEOVER (I-0-II)



- Can be used with rear-mount switch disconnectors
- Standard supplied direct operating control
- Padlockable direct operating handle
- Door-coupling control can be obtained by purchasing a shaft extension and handle GAX67B.


## FUSE HOLDER



- Can be used on GA16...32A disconnectors
- For $10.3 \times 38$ type fuses, not supplied
- To mount on switch load-end terminals
- Cover opening lock with switch disconnector in ON position.


## 3. SELLING POINTS

1) INSTALLATION EASE
2) HIGH ELECTRICAL AC21/AC23 CAPABILITIES
3) CERTIFICATIONS PER UL 508 / CSA 22.2 №14, UL98/ CSA 22.2 №4 AND KEMA
4) HIGH ELECTRICAL AND MECHANICAL LIFE
5) WIDE RANGE OF ACCESSORIES
6) VERSIONS FOR PHOTOVOLTAIC DUTY AVAILABLE (GA...D)
7) CAPABILITY TO ASSEMBLE CHANGEOVERS AND 6-8 POLE VERSIONS USING STANDARD SWITCH DISCONNECTORS
8) COMPATIBILITY WITH PREVIOUS SERIES
9) FIXING COMPATIBILITY WITH MAIN COMPETITORS' HANDLES e.g. ABB
10) SIMPLE AND QUICK MOUNTING
11) WIDE CHOICE OF COMBINATIONS
12) LOVATO ELECTRIC QUALITY AND SERVICE
13) COMPETITIVE PRICING.

## 4. ORDER CODES AND LIST PRICES

In the separate Excel file sent with this launch you can find 2009 list prices of the new GA series of switch disconnectors.

A) GA $\Rightarrow$ Switch disconnector series, 16-125A
B) $016 \Rightarrow A C 21$ Ith thermal current, 16A
$025 \Rightarrow$ AC21 Ith thermal current, 25A
$\ldots . \quad \Rightarrow$ AC21 lth thermal current, ...A
$125 \Rightarrow$ AC21 Ith thermal current, 125A
C) $\quad \mathrm{A} \quad \Rightarrow$ Rear-mount switch disconnector with direct operating control

C $\quad \Rightarrow$ Door-mount switch disconnector
D $\quad \Rightarrow$ Rear-mount switch disconnector, for photovoltaic duty.

## GA accessory codification


A J

B

C
D
A) GA $\Rightarrow$ Switch disconnector series, 16-125A
B) $\mathrm{X} \quad \Rightarrow$ Accessories
C) $\quad \Rightarrow \quad$ Type of accessory
$41 \quad \Rightarrow$ Fourth pole with early-make closing
$42 \Rightarrow$ Fourth pole with simultaneous closing as switch poles
$10 \Rightarrow$ Auxiliary contacts
$61 \Rightarrow$ Door-coupling handle
$70 \Rightarrow$ Shaft extension
D) $\quad . . \quad \Rightarrow$ Distinctive feature
$\ldots \quad \Rightarrow$ Electrical rating of fourth pole
... $\quad \Rightarrow$ Combination of auxiliary contacts
... $\quad \Rightarrow$ Handle colour
$\ldots \quad \Rightarrow$ Shaft extension length

## Enclosure codification for GA switch disconnectors


A) GA $\Rightarrow$ Switch disconnector series, 16-125A
B) Z $\Rightarrow$ Enclosure
C) $016 \Rightarrow A C 21$ Ith thermal current, 16A
$\ldots . \Rightarrow$ AC21 Ith thermal current, ...A
$125 \Rightarrow$ AC21 lth thermal current, 125A
_1 $\Rightarrow$ Empty enclosure for 16-40A switch disconnectors
_3 $\Rightarrow$ Empty enclosure for 63-125A switch disconnectors
D) $\quad \Rightarrow \quad$ Red/yellow handle

B $\quad \Rightarrow$ Black handle.

## 5. REFERENCE STANDARDS

The new GA switch disconnectors comply with the following standards:
IEC/EN 60947-1 - Low-voltage switchgear and controlgear - Part 1: General rules.
IEC/EN 60947-3 - Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units.

IEC/EN 60068-2-6 - Environmental testing - Part 2-6: Tests - Test Fc: Vibrations (sinusoidal).
IEC/EN 60068-2-27 - Environmental testing - Part 2-27: Tests - Test Fa and guidance: Shock.
IEC/EN 60068-2-61 - Environmental testing - Part 2: Test methods - Test Z/ABDM: Climatic sequence.

UL 508 / CSA $22.2 \mathrm{n}^{\circ 14}$ "Industrial control equipment" for GA016... 040 (tested and certified as "Manual Motor Controllers" intended to protect motor branch-circuits as well as "Suitable as motor disconnect").

UL 98 / CSA 22.2 nº "Enclosed and Dead-Front Switches" for GA063... 125 (tested and certified as above in addition to protect feeder circuits as well)

Certifications obtained: UL for USA and Canada (cULus).
Certifications pending: KEMA.

## 6. CROSS REFERENCE

The following lists the corresponding series of our major competitors along with their main differences and/or limitations when compared to our GA series.

## ABB $\rightarrow$ OT 16... 125 series

Disadvantages / Limitations:

- Size of 16-40A switch disconnectors too small
- Dimensions of 16-40A switch disconnectors not suitable for modular consumer panels
- AC23 capabilities inferior to average ratings ( 11 kW at 40 A vs LOVATO 18.5 kW at 40A)
- Direct operating handle integrated on rear-mount version with no padlockable feature
- "Traditional" DIN rail mounting requiring tools for removal.



## SOCOMEC $\rightarrow$ SIRCO M series

Disadvantages / Limitations:

- Dimensional incompatibility with earlier COMO series
- Larger size compared to average of competitors - 16-40A ratings $\rightarrow 45 \mathrm{~mm}$ vs LOVATO 16-40A ratings $\rightarrow 36 \mathrm{~mm}$ with identical capabilities in kW at 400 V
- 100-125A ratings $\rightarrow 78 \mathrm{~mm}$ vs LOVATO 63-125A ratings $\rightarrow 70 \mathrm{~mm}$ with identical capabilities in kW at 400 V
- Direct operating handle for rear-mount versions not standard supplied; to be purchased and handled separately
- Complicated door mounting accessory to fit on the rear-mount switch (rear-mount version is the only standard available)
- Minor visibility of small-sized front door-coupling handles
- Difficult handle mounting

- "Traditional" DIN rail mounting requiring tools for removal.


## SIEMENS $\rightarrow$ 3LD2 series

Disadvantages / Limitations:

- SONTHEIMER branded product
- Catalogue part numbers include handle and shaft extensions $\rightarrow$ large quantity of part numbers to stock and handle
- AC23 capabilities inferior to average values of competitors
- Direct operating handle for rear-mount type not available
- Door-coupling version is over sized in depth: extension centring system is complex and cumbersome
- Complicated mounting of handles
- "Traditional" DIN rail mounting requiring tools for removal
- No UL98 / CSA 22.2 n ${ }^{\circ} 4$ certification available.



## SCHNEIDER $\rightarrow$ VARIO series

Disadvantages / Limitations:

- Old style product design
- Dimensions larger than average of competitors:
- 12-40A rating $\rightarrow 55 \mathrm{~mm}$ vs LOVATO 16-40A ratings $\rightarrow 36 \mathrm{~mm}$ with lower kW ratings at 400 V too
- 63-80A ratings $\rightarrow 60 \mathrm{~mm}$ vs LOVATO 63-125A ratings $\rightarrow 70 \mathrm{~mm}$ with lower kW ratings at 400 V too
- 125-160A ratings $\rightarrow 90 \mathrm{~mm}$ vs LOVATO 63-125A ratings $\rightarrow 70 \mathrm{~mm}$ with lower KW ratings at 400 V too
- Catalogue part numbers include handle and shaft extensions or as loose elements $\rightarrow$ very large quantity of part numbers to stock and handle
- AC23 capabilities inferior to average values of competitors
- Direct operating handle for rear-mount version not available
- Padlockable handles oversized in depth practically 44mm
- Screw fixing for fourth pole and auxiliary contacts

- Difficult screw fixing of switch disconnectors; terminals must be removed first
- "Traditional" DIN rail mounting requiring tools for removal
- No UL98 / CSA $22.2 \mathrm{n}^{\circ} 4$ certification available.


## KATKO $\rightarrow$ KU series

Disadvantages / Limitations:

- One size covers 25-125A range
- Large dimensions for small ratings: 49.5 mm wide
- Monoblock four-pole version
- AC23 ratings inferior to average of competitors
- Direct operating handle of rear-mount versions is not padlockable
- Handle with release not available
- Auxiliary contacts are micro switches and have screw fixing
- "Traditional" DIN rail mounting requiring tools for removal
- No UL98 / CSA $22.2 n^{\circ} 4$ certification available
- Dedicated type for modular consumer panels.



## SALZER $\rightarrow \mathbf{H}$ series

Disadvantages / Limitations:

- Catalogue includes extensive range of products; many part numbers and little standardisation
- Switch disconnects are available with handles; shaft extensions to be purchased separately - could be confusing
- Door-coupling version oversized especially in depth
- AC23 ratings inferior to average of competitors
- Direct operating handle for rear-mount version not available
- Handle with release not available
- Screw fixing of fourth pole and auxiliary contacts


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## LOVATO ELECTRIC SPA - SWITCH DISCONNECTORS 16-125A in AC21A

- "Traditional" DIN rail mounting requiring tools for removal
- No UL98 / CSA 22.2 n ${ }^{\circ} 4$ certification available.


## ALLEN BRADELY - BRETER $\rightarrow$ L7 16... 100 series

Disadvantages / Limitations:

- Four different sizes to cover 16-100A range
- Dimensions bigger than average of competitors:
- 25-32A ratings $\rightarrow 45 \mathrm{~mm}$ vs LOVATO 16-40A ratings $\rightarrow$ 36 mm
- 80-100A ratings $\rightarrow 72 \mathrm{~mm}$ vs LOVATO 63-125A ratings $\rightarrow$ 70 mm
- Direct operating handle for rear-mount versions not available
- Handle with release not available
- "Traditional" DIN rail mounting requiring tools for removal
- No UL98 / CSA $22.2 n^{\circ} 4$ certification available

- Dedicated type for modular consumer panels.

In a separate Excel file attached to this launch you can find a detailed cross-reference table with competitors' part numbers.

## 7. AVAILABILITY AND DELIVERY TIMES

The new GA switch disconnectors are currently available from stock.
The following table indicates the availability dates for items not in production yet.

| Order code | Description | Available |
| :---: | :---: | :---: |
| GAX65 | Pistol grip handle for GA..A e GA..D. Screw fixing and yellow red handle | Last quarter 2009 |
| GAX65B | Pistol grip handle for GA..A e GA..D. Screw fixing and black handle |  |
| GAX66 | Pistol grip handle defeatable per UL508A for GA..A e GA..D. Screw fixing and yellow red handle. |  |
| GAX66B | Pistol grip handle defeatable per UL508A for GA..A e GA..D. Screw fixing and black handle. |  |
| GAX67B | Black handle for switches with GAX5000 o GAX5001 (I-0-II) interlock. |  |
| GAX5000 | Mechanical interlock for line changeover (I-0-II) for GA016A $\div$ GA040A switches |  |
| GAX5001 | Mechanical interlock for line changeover (I-0-II) for GA063A $\div$ GA125A switches |  |
| GAX6000 | Mechanical coupling system for 6-8 poles GA016A $\div$ GA040A and GA040D switches |  |
| GAX6001 | Mechanical coupling system for 6-8 poles GA063A $\div$ GA125A and GA080-125D switches |  |
| GAX391 | Fuse holder for GA016A $\div$ GA032A switches. Fuse 10,3x38 |  |

## 8. SALES CONDITIONS

Refer to your AREA MANAGER for discount conditions or to the 2009 SALES CONDITIONS table in your possession.

## 9. PUBLICITY DOCUMENTATION

In addition to this publication, the following are available:

- $\quad$ Brochure for GA 16-125A and GE 50-1250A switch disconnectors (code PD27 GB 03 09)
- Electronic price list in EXCEL and PDF format
- PowerPoint presentation
- Cross reference with competitors in EXCEL format
- Information page in website www.lovatoelectric.com
- Demo case (code PVALO2 02 09)

The new GA series switch disconnectors are indicated in LOVATO Electric March 2009 price list and the 2009-2010 General Catalogue.

## 10. LAUNCH PROGRAM

A specific launch program in your area should be agreed upon with your Sales Area Manager.

