LOVATO ELECTRIC S.P.A.
24020 GORLE (BERGAMO) ITALIA
VIA DON E. MAZZA, 12
TEL. 035 4282111
TELEFAX (Nazionale): 035 4282200
TELEFAX (International): +39 035 4282400
E-mail info@LovatoElectric.com
Web www.LovatoElectric.com

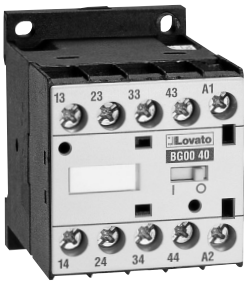
I129 GB 06 03

GB

POSITIVELY GUIDED CONTACTS

CE

Positively guided contacts are a requirement in safety circuits to correctly monitor the status of normally open contacts. Guided contacts imply that Normally Open (NO) and Normally Closed (NC) will operate together reciprocally but can never be simultaneously closed, even in case of NO contacts weld. This requirement is obtained by particular constructional details, such as reduced gap tolerance through which the mobile contact travels and the points of actuation are closer to the actual contact position.
Positively Guided Contacts are also called positively safety contacts, forced contacts, linked contacts, force or positive guided or positively driven contacts.
The positively guided contacts assume different meanings and terminologies in compliance with the product standards which are given below.

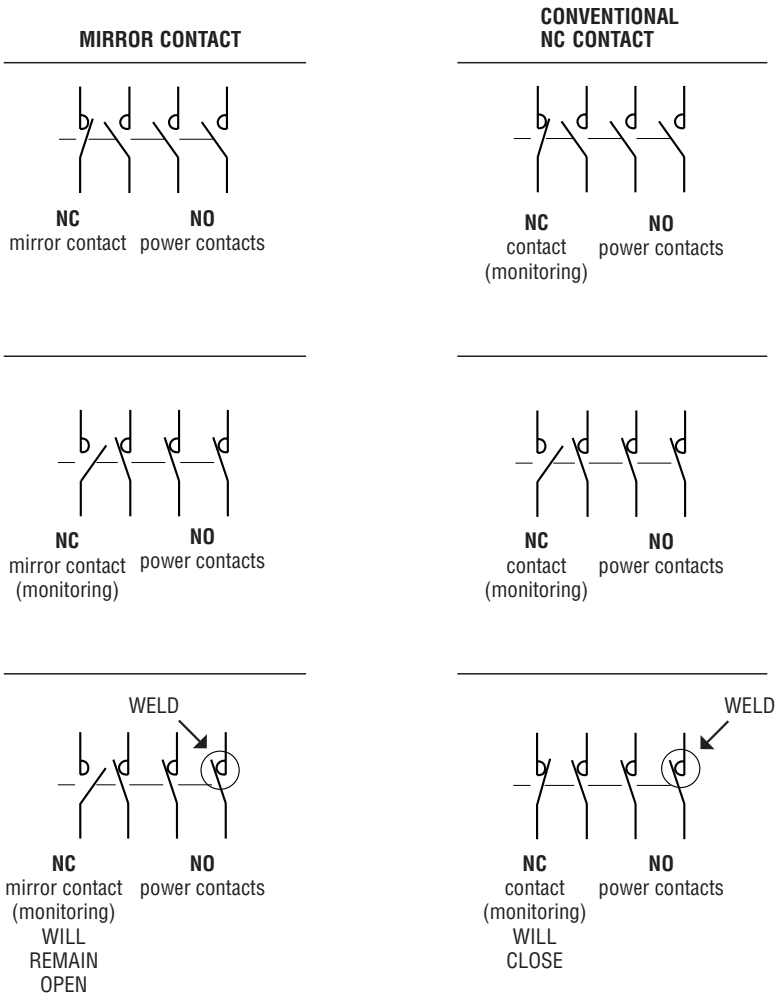


BG...

BF...

IEC 60947-4-1/A1 ed. 2 - Annex F
In this case, positively guided contacts are called auxiliary contacts linked with power contacts **(mirror contact)**.
The requirement is that when power poles weld, the auxiliary NC contacts remain open.
This requirement is standard supplied on all our contactors having an integrated NC auxiliary contacts:
BG..01, BF9..01, BF12..01, BF16..01, BF20..01 or BF25..01 types.

PHYSICAL PROPERTIES OF MIRROR CONTACT



IEC 60947-5-1/A2 ed. 2 - Annex L
In this case, positively guided contacts are called **mechanically linked contacts**.
The requirement is that NO and NC contacts can never be simultaneously closed, even if the NO contact or NC contact welds in closed position.
This requirement applies to auxiliary safety contacts included in control circuit devices where the actuating positively is provided internally; therefore, this does not apply to push buttons or limit switches.
Lovato control relays, such as **BG00** and **CF4**, which have at least one NO and one NC contact, fall into this category.

Note:
Control circuit devices, operated externally (e.g. push-button or limit-switches) can not have mechanically linked contact elements. Such devices, in safety applications, generally have contacts with Direct Opening Actuation.

BGX10 11 - BGX10 31
BGX10 22 - BGX10 13
BGXF10 11 - BGXF10 31
BGXF10 22 - BGXF10 13

G320 1

G480 11

G481 11

G484 11 - G484 21

G350 - G354

IEC 60947-5-1/A2 ed. 2 - Annex L
In this case, positively guided contacts are called **mechanically linked contacts**.
The requirement is that NO and NC contacts can never be simultaneously closed, even if the NO contact or NC contact welds in closed position.
This requirement applies to auxiliary safety contacts included in control circuit devices where the actuating positively is provided internally; therefore, this does not apply to push buttons or limit switches.
Several auxiliary contact blocks, which have at least one NO and one NC contact, fall into this category. These blocks include:
BGX10 11, BGX10 31, BGX10 22, BGX10 13, BGXF10 11, BGXF10 31, BGXF10 22, BGXF10 13, G350, G354, G480 11, G481 11, G484 11, G484 12 and **G484 21**.

PHYSICAL PROPERTIES OF MECHANICAL LINKED CONTACTS