

Gawe

ACDCTM
—  — **DYNAMICS**
www.acdc.co.za

Superior Switching Technology

LOW VOLTAGE SWITCHGEAR

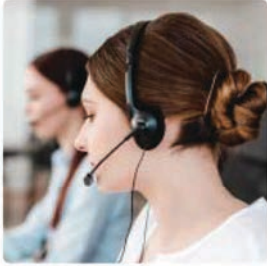
Extended Electrical Endurance



THINK ELECTRICAL



INTRODUCTION



Since 1944 Gawe Electro has been continuously developing product ranges in close cooperation with product users. All these years experience have built up recognised capabilities on product design, development and manufacturing, specifically on the fields of low voltage control, breaking and protection. Our worldwide presence with distributors in more than 40 countries guarantees qualified technical support always close to our customers. Gawe Electro has developed vast experience and competence on a wide range of specialist electro-technical products including cam operated switches, automatic transfer switches, motorised changeover switches, control relays and fuse protection.

Gawe Electro
ISO 9001
certified
company



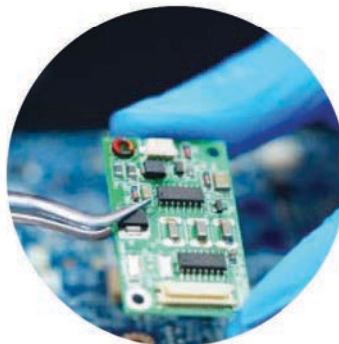
Gawe Electro has successfully completed ISO 9001:2015 certification process in cooperation with Bureau Veritas. This certification helps to demonstrate to customers that they can get products from Gawe Electro with a consistent high quality.

The natural ally for the industry and distribution



Quality

Heart to safety and reliability
In the different stages of production, the tests required by the regulations are carried out individually together with other additional tests determined by the technical staff.



Innovation

Specialized technical equipment
From an idea a qualified technical team will sort out a product through all developing stages; design, prototyping, laboratory extensive type testing and production execution.



History

Over 75 years of experience
For more than 70 years Gawe has represented technique, quality and service. Today we are market leaders on the field of low voltage electrical equipment.

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ROTARY ISOLATORS

Isolators

Rated Voltage:
690VAC.

c/w Operating handle and plate. All supplied as door mount. For other mounting options see accessories.



12-40A



63-80A



100-125A



160-250A



Simple 'click' front plate fixing.



IP20 finger safe.

Rated Current	ITH	AC21 @ 400VAC	AC23 @ 400VAC	1 Pole Code	Panel Depth	2 Pole Code	Panel Depth	3 Pole Code	Panel Depth	4 Pole Code	Panel Depth	Plate Size
12A	16A	7.5kW	4kW	AN5500000	30.5mm	AN5510000	30.5mm	AN5520000	40.5mm	AN5530000	40.5mm	48x48mm
16A	20A	11kW	5.5kW	AN5501000	30.5mm	AN5511000	30.5mm	AN5521000	40.5mm	AN5531000	40.5mm	
25A	32A	15kW	7.5kW	AN5502000	30.5mm	AN5512000	30.5mm	AN5522000	40.5mm	AN5532000	40.5mm	60x60mm
32A	40A	18.5kW	11kW	AN5503100	36.3mm	AN5513100	36.3mm	AN5523100	48.3mm	AN5533100	48.3mm	
40A	50A	22kW	18.5kW	AN5504100	36.3mm	AN5514100	36.3mm	AN5524100	48.3mm	AN5534100	48.3mm	66x66mm
63A	70A	37kW	22kW	AN5506100	46mm	AN5516100	46mm	AN5526100	62.5mm	AN5536100	62.5mm	
80A	100A	45kW	30kW	-	-	AN5518100	46mm	AN5528100	62.5mm	AN5538100	62.5mm	
100A	100A	55kW	30kW	-	-	AN5517100	46mm	AN5527100	62.5mm	AN5537100	62.5mm	
125A	125A	75kW	37kW	-	-	-	-	AN5529100	62.5mm	AN5539100	62.5mm	
160A	160A	90kW	52kW	-	-	-	-	AN552A100	95.5mm	AN553A100	95.5mm	
200A	200A	110kW	65kW	-	-	-	-	AN552B100	95.5mm	AN553B100	95.5mm	
250A	250A	132kW	-	-	-	-	-	AN552C100	95.5mm	AN553C100	95.5mm	

Spare Handles

for Isolators



12-40A

63-80A

100-250A



White Handle c/w Plate 0-1



Black/Grey Padlockable



Red/Yellow Padlockable



Black/Grey Padlockable (3 lock)



Red/Yellow Padlockable (3 lock)

Rated Current	Black Handle c/w Plate 0-1	White Handle c/w Plate 0-1	Black/Grey Padlockable	Red/Yellow Padlockable	Black/Grey Padlockable (3 lock)	Red/Yellow Padlockable (3 lock)
12-25A	AR0386040	AR0386010	AK1200143	AK1200523	AK1300143	AK1300523
32-40A	AR0386140	AR0386110	AK1200143	AK1200523	-	-
63-80A	AR0386640	AR0386610	AK1200146	AK1200526	-	-
100-250A	AR0386840	AR0386810	AK1200148	AK1200528	-	-

CHANGE OVER SWITCHES

Rated Voltage:
690VAC

c/w Operating handle and plate. All supplied as door mount. For other mounting options see accessories.



12-40A



63-80A



100-125A

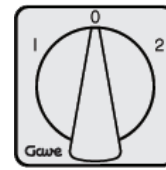
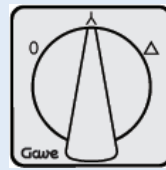
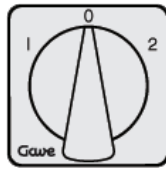
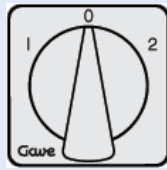


160-250A

Rated Current	ITH	AC21 @ 400VAC	AC23 @ 400VAC	2 Pole Code	Panel Depth	3 Pole Code	Panel Depth	4 Pole Code	Panel Depth	Plate Size
16A	20A	11kW	5.5kW	-	-	AN5621000	50.5mm	AN5631000	60.5mm	48x48mm
25A	32A	15kW	7.5kW	-	-	AN5622000	50.5mm	AN5632000	60.5mm	
32A	40A	18.5kW	11kW	AN5613100	48.3mm	AN5623100	60.3mm	AN5633100	72.3mm	60x60mm
40A	50A	22kW	18.5kW	-	-	AN5624100	60.3mm	AN5634100	72.3mm	
63A	70A	37kW	22kW	AN5616100	62.5mm	AN5626100	79mm	AN5636100	95.5mm	66x66mm
80A	100A	45kW	30kW	-	-	AN5628100	79mm	AN5638100	95.5mm	
100A	100A	55kW	30kW	-	-	AN5627100	79mm	AN5637100	95.5mm	
125A	125A	75kW	37kW	-	-	AN5629100	79mm	AN5639100	95.5mm	
160A	160A	90kW	52kW	-	-	AN562A100	128.5mm	AN563A100	161.5mm	
200A	200A	110kW	65kW	-	-	AN562B100	128.5mm	AN563B100	161.5mm	
250A	250A	132kW	-	-	-	AN562C100	128.5mm	AN563C100	161.5mm	

MOTOR & PROCESS CONTROL CAM SWITCHES

Motor Control Switches
Door Mount



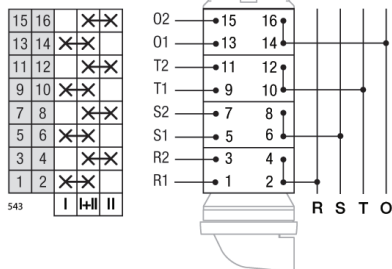
Rated Current	AC21 @ 400VAC	AC23 @ 400VAC	DC Reversing	Panel Depth	3 Phase Reversing	Panel Depth	Star Delta	Panel Depth	Dahlander	Panel Depth	Plate Size
12A	7.5kW	4kW	AN6700000	40.5mm	AN6710000	50.5mm	AN6400000	60.5mm	AN6810000	60.5mm	48x48mm
16A	11kW	5.5kW	-	-	AN6711000	50.5mm	AN6401000	60.5mm	AN6811000	60.5mm	48x48mm
25A	15kW	7.5kW	-	-	AN6712000	50.5mm	AN6402000	60.5mm	AN6812000	60.5mm	48x48mm
32A	18.5kW	10kW	-	-	AN6713100	60.3mm	AN6403100	72.3mm	AN6813100	72.3mm	64x64mm
40A	22kW	11kW	-	-	AN6714100	60.3mm	AN6404100	72.3mm	AN6814100	72.3mm	64x64mm

Stepping Switches - Door Mount

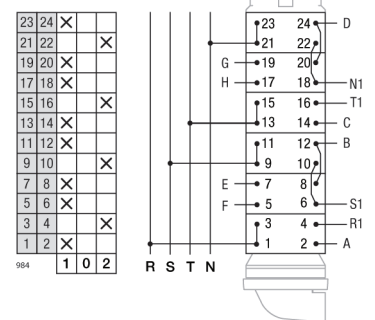


Type	Rated Current	AC23 @ 400VAC	Code	Plate Marking	Panel Depth	Plate Size
1 Pole 3 step + off	12A	4kW	AN6110000	0-1-2-3	40.5mm	48x48mm
1 Pole 5 step + off	12A	4kW	AN6130000	0-1-2-3-4-5	50.5mm	48x48mm
1 Pole 7 step + off	12A	4kW	AN6150000	0-1-2-3-4-5-6-7	60.5mm	48x48mm

Overlapping Change Over Switch



By-Pass Change Over Switch



Rated Current	AC21 @ 400VAC	AC23 @ 400VAC	4 Pole Code	Panel Depth	Rated Current	AC21 @ 400VAC	AC23 @ 400VAC	4 Pole Code	Panel Depth
12A	7.5kW	4kW	AN5430000	60.5mm	25A	15kW	7.5kW	AN9842000	80.5mm
16A	11kW	5.5kW	AN5431000	60.5mm	40A	22kW	18.5kW	AN9844100	96.3mm
25A	15kW	7.5kW	AN5432000	60.5mm	63A	37kW	22kW	AN9846100	128.5mm
32A	18.5kW	11kW	AN5433100	72.3mm	80A	45kW	30kW	AN9848100	128.5mm
40A	22kW	18.5kW	AN5434100	72.3mm	100A	55kW	30kW	AN9847100	128.5mm
63A	37kW	22kW	AN5436100	95.5mm	125A	75kW	37kW	AN9849100	128.5mm

Mounting Accessories - for all Gawe Cam Switches



Code	Description	For Switch Amps
AK0000003	Base mounting plate	Up to 40A
AK0000006	Base mounting plate	63-250A
AK0100007	Din rail mounting plate	Up to 63A
AK1730003	Base mounting kit with extension shaft and door interlock	Up to 40A
AK1730006	Base mounting kit with extension shaft and door interlock	63-250A
AK1740003	Din rail mounting kit with extension shaft and door interlock	Up to 40A
AK1740006	Din rail mounting kit with extension shaft and door interlock	63-250A
AK2240003	IP65 gasket for door mount switches	Up to 40A
AK2240006	IP65 gasket for door mount switches	63-250A

DISCREPANCY & POSITION SWITCHES

- Discrepancy switches are used to control and monitor the position of isolator switches and circuit breakers and signal any discrepancy on their operation.
- Control contacts rated 25Amp
- Signal elements consume 50mA from supply to switch
- Single colour signal: White
- Bi-colour signal (Green) 0-180°, (Red) 90-270°. Colours only indicate switch position. LED on/off will indicate correct operation or discrepancy.
- Each unit has one control contact and one signalling contact (Switches with different contact configurations available on request)

	Push & Turn with Spring Return		Turn		Turn & Push																																																																									
Note: Switches are supplied with only the operating handle. Bezels are to be ordered separately (see accessories below).																																																																														
Code	AES112000	AEB112210	AMS112000	AMB112210*	AEV112000	-																																																																								
Type	Single colour	Bi-colour	Single colour	Bi-colour	Single colour	Bi-colour																																																																								
Supply Voltage	24 - 240VAC 24 - 150VDC	*110VAC	24 - 240VAC 24 - 150VDC	*110VAC	24 - 240VAC 24 - 150VDC	*110VAC																																																																								
Description	<p>ES push-turn discrepancy control switches have two fixed positions for pre-selection contacts at 90° and two additional push-turn impulse positions with 30° spring return.</p> <table border="1"> <tr><td>2</td><td>02</td><td></td><td></td><td>X</td><td></td></tr> <tr><td>1</td><td>01</td><td>X</td><td></td><td></td><td>MANDO CONTROL</td></tr> <tr><td>21</td><td>021</td><td>X</td><td>X</td><td></td><td>SIGNAL</td></tr> <tr><td>20</td><td>020</td><td></td><td></td><td>X</td><td>SIGNAL</td></tr> </table>		2	02			X		1	01	X			MANDO CONTROL	21	021	X	X		SIGNAL	20	020			X	SIGNAL	<p>MS Discrepancy control switches have two fixed positions for pre-selection contacts at 90° and two additional impulse positions with 30° spring return.</p> <table border="1"> <tr><td>2</td><td>02</td><td></td><td></td><td>X</td><td></td></tr> <tr><td>1</td><td>01</td><td>X</td><td></td><td></td><td>MANDO CONTROL</td></tr> <tr><td>21</td><td>021</td><td>X</td><td>X</td><td></td><td>SIGNAL</td></tr> <tr><td>20</td><td>020</td><td></td><td></td><td>X</td><td>SIGNAL</td></tr> </table>		2	02			X		1	01	X			MANDO CONTROL	21	021	X	X		SIGNAL	20	020			X	SIGNAL	<p>EV switches have two fixed positions at 90° with turn contacts and discrepancy contacts, and two vertical push positions for maintained contacts.</p> <table border="1"> <tr><td>2</td><td>02</td><td></td><td>X</td><td></td><td>EMPUJE PUSH</td></tr> <tr><td>1</td><td>01</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>21</td><td>021</td><td>X</td><td></td><td></td><td>GIRO TURN</td></tr> <tr><td>20</td><td>020</td><td></td><td>X</td><td></td><td></td></tr> </table>		2	02		X		EMPUJE PUSH	1	01	X				21	021	X			GIRO TURN	20	020		X		
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Accessories																																																																														
Code	AP327906		AP326904		AP325906		AK1020050																																																																							
Description	Grey faceplate with black insert		Black faceplate with chrome insert		Chrome faceplate		Spare handle																																																																							
Operation	<p>Signal OK Circuit breaker and control/signal contacts are disconnected. Knob light is on.</p>		<p>Signal OK Circuit breaker and control/signal contacts are connected. Knob light is on.</p>		<p>Signal Discrepancy Circuit breaker is disconnected (protection has tripped): and control/signal contacts are connected. Knob light is off indicating discrepancy.</p>																																																																									

VOLTMETER & AMMETER SWITCHES



A7431100



A7461100



A7671100

Code	Description	Size (mm)
A7431100	Voltmeter switch 3 phase 16A phase to phase measurement. O, RS, ST, TR	48 x 48 x 50.5
A7461100	Voltmeter switch 3 phase 16A phase to neutral measurement. RN, SN, TN, O, TR, ST, RS	48 x 48 x 60.5
A7671100	Ammeter switch 3 phase 16A. O, R, S, T	48 x 48 x 50.5



ILLUMINATED CAM SWITCHES

Padlockable Illuminated Isolators - Position controlled

Red in Off Position, Green in On Position.
Supply for LED: 230VAC*



Illuminated Changeover Switches - Position controlled

Red in Position 0, Green in Position 1 and 2.
Supply for LED: 230VAC*



On/Off Multi-coloured Illuminated Switches - Illumination controlled by external signal

Green/ Red/ Yellow illumination.
Supply for LED: 230VAC*



A-5527T0S

Isolators

Rated Current	ITH	AC21 @ 400VAC	AC23 @ 400VAC	2 Pole Code	Panel Depth	3 Pole Code	Panel Depth	4 Pole Code	Panel Depth	Plate Size
16A	20A	11kW	5.5kW	AB551112L	66mm	AB552112L	76mm	AB553112L	76mm	48x48mm
32A	40A	18.5kW	11kW	AB551312L	77mm	AB552312L	89mm	AB553312L	89mm	64x64mm
40A	50A	22kW	18.5kW	AB551412L	77mm	AB552412L	89mm	AB553412L	89mm	
63A	70A	37kW	22kW	AB551612L	87mm	AB552612L	103mm	AB553612L	103mm	
100A	100A	55kW	30kW	AB551712L	87mm	AB552712L	103mm	AB553712L	103mm	64x64mm
125A	125A	75kW	37kW	AB551912L	87mm	AB552912L	103mm	AB553912L	103mm	

* Other Colours and Supply voltages Available on request

Changeover Switches

Rated Current	ITH	AC21 @ 400VAC	AC23 @ 400VAC	2 Pole Code	Panel Depth	3 Pole Code	Panel Depth	4 Pole Code	Panel Depth	Plate Size
16A	20A	11kW	5.5kW	A-561112L	76mm	A-562312L	86mm	A-563312L	96mm	48x48mm
32A	40A	18.5kW	11kW	A-561312L	89mm	A-562312L	101mm	A-563312L	113mm	64x64mm
40A	50A	22kW	18.5kW	A-561412L	89mm	A-562412L	101mm	A-563412L	113mm	
63A	70A	37kW	22kW	A-561612L	103mm	A-562612L	120mm	A-563612L	136mm	
100A	100A	55kW	30kW	A-561712L	103mm	A-562712L	120mm	A-563712L	136mm	64x64mm
125A	125A	75kW	37kW	A-561912L	103mm	A-562912L	120mm	A-563912L	136mm	

* Other Colours and Supply voltages Available on request

Multi-Coloured Switches

Rated Current	ITH	AC21 @ 400VAC	AC23 @ 400VAC	2 Pole Code	Panel Depth	3 Pole Code	Panel Depth	4 Pole Code	Panel Depth	Plate Size
16A	20A	11kW	5.5kW	A-5511T0S	74mm	A-5521T0S	84mm	A-5531T0S	84mm	48x48mm
32A	40A	18.5kW	11kW	-	-	A-5523T0S	89mm	A-5533T0S	89mm	64x64mm
40A	50A	22kW	18.5kW	-	-	A-5524T0S	89mm	A-5534T0S	89mm	
63A	70A	37kW	22kW	-	-	A-5526T0S	103mm	A-5536T0S	103mm	
100A	100A	55kW	30kW	-	-	A-5527T0S	103mm	A-5537T0S	103mm	64x64mm
125A	125A	75kW	37kW	-	-	A-5529T0S	103mm	A-5539T0S	103mm	

* Other Colours and Supply voltages Available on request

Add on Lighting Modules for Gawe CAM Switches

Type		12-16A Code	32-125A Code
Position Controlled 0 = Red, 1 = Green	230V	AK2400123F	AK2400126F
	400V	AK2440123F	AK2440126F
	24V	AK2420123F	AK2420126F
Position Controlled 0 = Red, 1&2 = Green	230V	AK2402123F	AK2402126F
	400V	AK2442123F	AK2442126F
	24V	AK2422123F	AK2422126F
External Signal Control Yellow, Red, Green	230V	AK2503123F	AK2503126F
	400V	AK2543123F	AK2543126F
	24V	AK2523123F	AK2523126F
Padlockable Handle for Isolators		AK1230503	AK1230506

For compatible switches see page 230-231



Position Controlled

External Signal Controlled



Padlockable Handle

NEW

ENCLOSED CHANGEOVER SWITCHES IP65

Rated Voltage: 690VAC
 Ratings below 63A are AC21
 Ratings from 62A-250A are AC23



16-32A



40-100A



100-125A



160-250A

Metal Enclosures c/w Gland Plate

Code 3P	AB562-16A	AB562-25A	AB562-32A	AB562-40A	AB562-63A	AB562P-100A	AB562-100A	AB562-125A	AB562-160A	AB562-200A	AB562-250A
Code 4P	AB563-16A	AB563-25A	AB563-32A	AB563-40A	AB563-63A	AB563P-100A	AB563-100A	AB563-125A	AB563-160A	AB563-200A	AB563-250A
Rated Current	16A	25A	32A	40A	63A	100A	100A	125A	160A	200A	250A
Thermal Rating (Ithe)	20A	25A	40A	40A	70A	100A	100A	125A	160A	200A	250A
Terminal Capacity	2.5-6 mm ²	2.5-6 mm ²	10-25mm ²	10-25mm ²	16-50mm ²	16-50mm ²	16-50mm ²	16-50mm ²	70mm ²	95mm ²	120mm ²
Enclosure	Plastic						Steel - Grey RAL7032				
Size (mm) H x W x D	190 x 140 x 70			240 x 190 x 90	240 x 190 x 130		300 x 300 x 200		400 x 300 x 200	500 x 400 x 200	600 x 400 x 260

FIRE RATED SWITCH DISCONNECTOR IP65

Designed to meet EN-12101-3 which specifies temperature/time requirements for Powered Smoke and Heat Exhaust fans in order to maintain safety under emergency conditions.

EN-12101-3/ F300:



The switch will be operational after 1 hour at 300°C.

EN-12101-3/ F400:



The switch will be operational after 2 hours at 400°C.



* Four and Six Pole Only Available Ex - Indent



25A

40-63A

100 - 125A

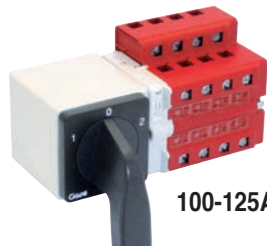
NEW 3 Pole Code	AB55225F3	AB55221F4	AB55241F4	AB55261F4	AB55271F4	AB55291F4
3 Pole + 1 Aux (1NO + 1NC) Code	AB55225F3-A	AB55221F4-A	AB55241F4-A	AB55261F4-A	AB55271F4-A	AB55291F4-A
NEW *4 Pole Code	AB55325F3	AB55321F4	AB55341F4	AB55361F4	AB55371F4	AB55391F4
NEW *6 Pole Code	AB55625F3	AB55621F4	AB55641F4	AB55661F4	AB55671F4	AB55691F4
Temperature Rating to EN12101-3	F300	F400	F400	F400	F400	F400
Rated Current In	25A	25A	40A	63A	100A	125A
Thermal Rating Ith	30A	30A	50A	70A	120A	125A
Rated Operating Voltage	690VAC	690VAC	690VAC	690VAC	690VAC	690VAC
AC23kW @ 400 VAC	7.5kW	7.5kW	18.5kW	22kW	30kW	37kW
Size L x W x H (mm)	100 x 100 x 106	130 x 130 x 124	160 x 160 x 124	160 x 160 x 124	250 x 250 x 145	250 x 250 x 145

ONLOAD ISOLATOR, CHANGEOVER & BYPASS SWITCHES

Supplied c/w black operating handle. Door mount kits to be ordered separately.



63-80A



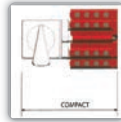
100-125A



160-250A



Integrated Link



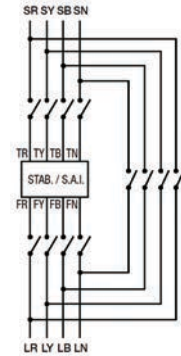
Compact Size

Integrating two circuits on each cell permits an extra compact size. Up to 40% space saving to conventional switches.



Installation

Designed to mount directly on DIN Rail.



Bypass Switch

Switching Scheme for use with Voltage Stabilisers.

Rated Operational Current	63A	80A	100A	125A	160A	200A	250A
Code 3 pole isolator switch	LQ5526100	LQ5528100	LQ5527100	LQ5529100	LQ552A100	LQ552B100	LQ552C100
Code 4 pole isolator switch	LQ5536100	LQ5538100	LQ5537100	LQ5539100	LQ553A100	LQ553B100	LQ553C100
Code 3 pole changeover switch	LQ5626100	LQ5628100	LQ5627100	LQ5629100	LQ562A100	LQ562B100	LQ562C100
Code 4 pole changeover switch	LQ5636100	LQ5638100	LQ5637100	LQ5639100	LQ563A100	LQ563B100	LQ563C100
Code 4 Pole Bypass Switch	L271F6100	-	L271F7100	L271F9100	L271FA100	L271FB100	L271FC100
Rated operating voltage	690VAC	690VAC	690VAC	690VAC	690VAC	690VAC	690VAC
AC21 Kw @ 400V	37	45	55	75	90	110	132
AC23 Kw @ 400V	22	30	30	37	52	65	-
Maximum cable size (mm ²)	16 - 50	16-50	16-50	16-50	70	95	120
Terminal type	Screw	Screw	Screw	Screw	Bolt	Bolt	Bolt



LK1720006



LK0800006



AK2240006



AK1200146



AK1200526



AK1200148



AK1200528

Accessories

Code	Description
LK1720006	Door Mounting Kit with 200mm shaft & door interlock
LK0800006	Door Mounting Kit 200mm shaft extension
AK1200146	Black/Grey Padlockable Handle for 63-80A
AK1200148	Black/Grey Padlockable Handle for 100-250A
AK1200526	Red/Yellow Padlockable Handle for 63-80A
AK1200528	Red/Yellow Padlockable Handle for 100-250A
AK2240006	IP65 Gasket for Door Mounted Handles

EXTENDED RANGE

AUTOMATIC TRANSFER SWITCHES IP54

Suitable for industrial, commercial and domestic 3ph+N 400V applications, the Automatic Transfer Switch panels provide automatic control between mains and standby generators. The controller monitors the mains supply and in the event of failure, provides a start signal to the generator and switches over to the generator supply when voltage and frequency have been stabilised. Return to the mains supply will be automatic after the mains supply has been restored.



- Motorised changeover switches can be manually operated and locked out for maintenance.
- Gave switch to terminals.YES1 direct connection to switch.
- Generator must be capable of remote start and stop
- Mains & Generator Voltage 400V 50Hz. Control voltage 12VDC with battery back up independant of generator battery voltage.
- **ATS-10** controller can be programmed to have additional delays and determine when to connect the generator to load by either monitoring the output voltage or responding to a signal from the generator.
- **IP65** with outer glazed door and instrument on inner door, manufactured to order.

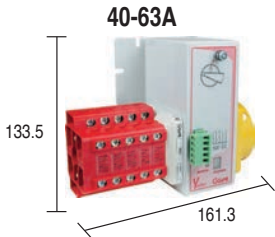
Gave 4P	ATS 040	ATS 063	ATS 080	ATS 100	ATS 125	ATS 160	ATS 200	ATS 250	-	-	-	-
YES1 4P	ATS 040Y	ATS 063Y	ATS 080Y	ATS 100Y	-	ATS 160Y	-	ATS 250Y	ATS 400	ATS 630	ATS 1000	ATS 1250
YES1 3P	ATS 040Y3	ATS 063Y3	ATS 080Y3	ATS 100Y3	-	ATS 160Y3	-	ATS 250Y3	ATS 400-3	ATS 630-3	ATS 1000-3	ATS 1250-3
Rated Current	40A	63A	80A	100A	125A	160A	200A	250A	400A	630A	1000A	1250A
Generator	28kVA	44kVA	55kVA	69kVA	87kVA	111kVA	139kVA	173kVA	277kVA	436kVA	554kVA	865kVA
Size (mm)	600 x 400 x 260		700 x 500 x 260		800 x 600 x 260		1000 x 600 x 320		1200 x 800 x 320		1600 x 800 x 400	
Panel Colour	Orange (Red, Grey available on request)										Orange (Grey available on request)	

MOTORIZED CHANGEOVER SWITCHES 63-250A

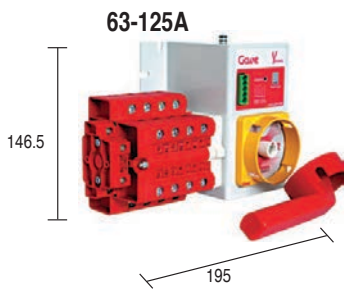
Rated Voltage: 690VAC@50Hz
All current ratings above 80A are AC23

Auxiliary contacts included.
No external bridging required.
Padlockable manual operating handle included.

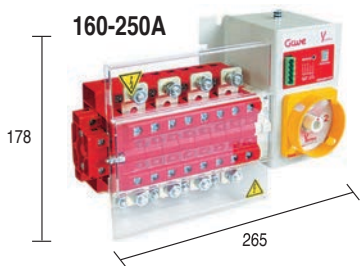
Note: All 230 VAC units are supplied with one Power Supply.



40-63A



63-125A



160-250A



New 3 Source motorised changeover switch is used in applications where three sources of supply are available, e.g:

- 0 = Off
- 1 = Mains
- 2 = Generator
- 3 = Battery Back-Up



NEW

Automatic Phase Selection to maintain power supply continuity for single phase loads. Especially useful in telecoms rectifier applications

4P Code	Rated Current	KVA @ 400V AC21	AC23 @ 400VAC	Terminal Capacity mm ²
Motor Volts 12VDC				
Y-5634101	40A (AC21)	28kVA	18.5kW	10 - 25mm ² Cage
Y-5635101	63A (AC22)	44kVA	-	10 - 25mm ² Cage
YL5636101	63A (AC23)	44kVA	37kW	16 - 50mm ² Cage
YL5638101	80A	55kVA	45kW	16 - 50mm ² Cage
YL5637101	100A	69kVA	45kW	16 - 50mm ² Cage
YL5639101	125A	87kVA	55kW	16 - 50mm ² Cage
YL563A101	160A	111kVA	60kW	70mm ² M8 Stud
YL563B101	200A	139kVA	75kW	95mm ² M8 Stud
YL563C101	250A	173kVA	90kW	120mm ² M8 Stud

Motor Volts 24VDC				
Y-5634201	40A (AC21)	28kVA	18.5kW	10 - 25mm ² Cage
Y-5635201	63A (AC22)	44kVA	-	10 - 25mm ² Cage
YL5636201	63A (AC23)	44kVA	37kW	16 - 50mm ² Cage
YL5638201	80A	55kVA	45kW	16 - 50mm ² Cage
YL5637201	100A	69kVA	45kW	16 - 50mm ² Cage
YL5639201	125A	87kVA	55kW	16 - 50mm ² Cage
YL563A201	160A	111kVA	60kW	70mm ² M8 Stud
YL563B201	200A	139kVA	75kW	95mm ² M8 Stud
YL563C201	250A	173kVA	90kW	120mm ² M8 Stud

Motor Volts 230VAC				
Y-5634301	40A (AC21)	28kVA	18.5kW	10 - 25mm ² Cage
Y-5635301	63A (AC22)	44kVA	-	10 - 25mm ² Cage
YL5636301	63A (AC23)	44kVA	37kW	16 - 50mm ² Cage
YL5638301	80A	55kVA	45kW	16 - 50mm ² Cage
YL5637301	100A	69kVA	45kW	16 - 50mm ² Cage
YL5639301	125A	87kVA	55kW	16 - 50mm ² Cage
YL563A301	160A	111kVA	60kW	70mm ² M8 Stud
YL563B301	200A	139kVA	75kW	95mm ² M8 Stud
YL563C301	250A	173kVA	90kW	120mm ² M8 Stud

3 Sources Motorised Changeover Switch 12VDC				
YL3936101	63A (AC23)	44kVA	37kW	10 - 25mm ² Cage
YL3938101	80A	55kVA	45kW	16 - 50mm ² Cage
YL3937101	100A	69kVA	45kW	16 - 50mm ² Cage
YL3939101	125A	87kVA	55kW	16 - 50mm ² Cage
YL393A101	160A	111kVA	60kW	70mm ² M8 Stud
YL393B101	200A	139kVA	75kW	95mm ² M8 Stud
YL393C101	250A	173kVA	90kW	120mm ² M8 Stud

3 Sources Motorised Changeover Switch 24VDC				
YL3936201	63A (AC23)	44kVA	37kW	10 - 25mm ² Cage
YL3938201	80A	55kVA	45kW	16 - 50mm ² Cage
YL3937201	100A	69kVA	45kW	16 - 50mm ² Cage
YL3939201	125A	87kVA	55kW	16 - 50mm ² Cage
YL393A201	160A	111kVA	60kW	70mm ² M8 Stud
YL393B201	200A	139kVA	75kW	95mm ² M8 Stud
YL393C201	250A	173kVA	90kW	120mm ² M8 Stud

Motorised R-O-S-T Phase selector Switch 12VDC				
YL6114101	40A (AC21)	28kVA	18.5kW	10 - 25mm ² Cage
YL6116101	63A (AC23)	44kVA	37kW	10 - 25mm ² Cage
YL6117101	100A	69kVA	45kW	16 - 50mm ² Cage
YL6119101	125A	87kVA	55kW	16 - 50mm ² Cage

Power Supply for above Change Over Switches					Input
Code	DC Voltage	Rated Current	Rated Power	Voltage Adj. Range	Voltage Range
DRA30-12	12V	2.5A	30	10.8~13.2V	90~265VAC
DRA60-24	24V	2.5A	30	24~28V	90~265VAC



LARGE FRAME MOTORISED CHANGE OVER SWITCHES

According to Standards:
IEC 60947-3, IEC 60947-6-1
Positive break indication.
Emergency manual operation.
Padlockable for maintenance.
Modular controller for automatic transfer. Multiple accessories for installation and safety.

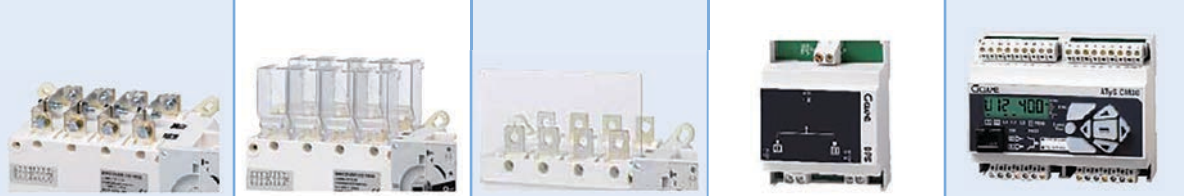


Motorised Change Over Switches - Manual override with handle

Designed to operate in commercial and industrial industries with operational categories of AC-22, AC-23 and is used to switch between normal and high loads. The motorised switch perform the load switching of 2 power supplies via potential-free contacts with incoming signal from external controllers or relays using a logic of impulses or of maintained contacts.

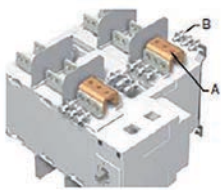
4P Code	AC-22 415V - 525V	AC-23 415V	AC-23 525V	DC-23 220V	Frame size	Size 4 Pole H x W x D (mm)
Size B4 and B5						
56MAC4025	250A	250A	250A	250A	B4	160 x 312 x 148
56MAC4040	400A	400A	400A	400A	B4	160 x 312 x 148
56MAC4063	630A	630A	630A	630A	B5	260 x 379 x 225
Size B6 and B7						
56MAC4080	800A	800A	800A	800A	B6	321 x 466 x 298
56MAC4100	1000A	1000A	1000A	1000A	B6	321 x 466 x 298
56MAC4120	1250A	1250A	1250A	1250A	B6	330 x 466 x 298
56MAC4160	1600A	1600A	1600A	1600A	B7	288 x 598 x 298
Size B8						
56MAC4200	2000A	2000A	2000A	2000A	B8	380 x 598 x 425
56MAC4250	2500A	2500A	2500A	2500A	B8	380 x 598 x 425
56MAC4320	3200A	3200A	3200A	3200A	B8	380 x 598 x 425

Accessories



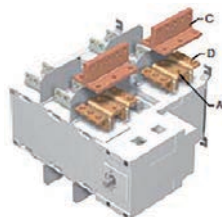
Size	Frame	Bridging Bars	Terminal Shrouds	Protection Screens	Double Supply Module	Modular Controller
250A	B4	1P S0410025	4P S074B4	4P S064B4C	DPS	CM30
400A	B5	1P S0410040		4P S064B5C		
630A	B5	1P S0410063	4P S074B5	4P S064B6C		
800A	B6	1P S0410080	-	4P S064B7C		
1000A	B6	1P S0410120	-	-		
1250A	B7	1P S0410160	-	-		
1600A	B7	See Bridging Bar Table	-	-		
1800A	B7					
2000A	B8					
2500A	B8					
3200A	B8					

Bridging Bar Table 2000A - 2500A



Part	Description	Size	Code
A	Connection Bar		S04A1200
B	Bolt Kit 35mm	2000A	S04B1200
C	T Bar + Bolt Kit	2500A	S04C1200
D	Bracket + Bolt Kit		S04D1200

Bridging Bar Table 3200A



Part	Description	Size	Code
A	Connection Bar		S04A1200
B	Bolt Kit 35mm	3200A	S04B1200
C	T Bar + Bolt Kit		S04C1200
D	Bracket + Bolt Kit		S04D1200



Innovation - Specialized Technical Equipment

From an idea a qualified technical team will sort out a product through all developing stages; design, prototyping, laboratory extensive type testing and production execution.

The result shows on an innovative product offering real added value to the customer. Market recognition is cause of satisfaction to all persons contributing with their daily effort on future developments.



LARGE FRAME ISOLATORS

According to standards:
IEC 60947-3

Positive brake indication.
Height thermal strength.
Large number of electrical and mechanical operations.
Auxiliary contacts for control circuits.



On Load Isolators - Handle to be ordered separately

Designed to operate in normal and abnormal conditions with operational categories of AC-22, AC-23 and DC-21 circuits up 500V.

3P Code	4P Code	AC-22 400V	AC-23 400V/500V	Frame size	Size 3 Pole H x W x D	Size 4 Pole H x W x D
GAV55AC3012	GAV55AC4012	125A	125/125A	B3	135 x 140 x 115	135 x 170 x 115
GAV55AC3016	GAV55AC4016	160A	160A/160A	B3	135 x 140 x 115	135 x 170 x 115
GAV55AC3020	GAV55AC4020	200A	200A/200A	B4	160 x 180 x 115	160 x 230 x 115
GAV55AC3025	GAV55AC4025	250A	250A/250A	B4	160 x 180 x 115	160 x 230 x 115
GAV55AC3040	GAV55AC4040	400A	400A/400A	B5	235 x 230 x 160	235 x 290 x 160
GAV55AC3063	GAV55AC4063	630A	630A/630A	B5	260 x 230 x 160	260 x 290 x 160
GAV55AC3080	GAV55AC4080	800A	800A/800A	B6	x 280 x 166	321 x 360 x 166
GAV55AC3100	GAV55AC4100	1000A	1000A/1000A	B6	x 280 x 166	321 x 360 x 166
GAV55AC3120	GAV55AC4120	1250A	1250A/1250A	B7	x 372 x 166	288 x 492 x 166
GAV55AC3160	GAV55AC4160	1600A	1600A/1250A	B7	x 372 x 166	288 x 492 x 166
GAV55AC3200	GAV55AC4200	2000A	2000A/1600A	B8	380 x 372 x 226	380 x 492 x 226
GAV55AC3250	GAV55AC4250	2500A	2500A/2000A	B8	380 x 372 x 226	380 x 492 x 226
GAV55AC3320	GAV55AC4320	3200A	3200A/2500A	B8	380 x 372 x 226	380 x 492 x 226

Accessories



Size	Frame	Direct Handle	External Handle	Extension Shaft	Auxiliary Contact	Terminal Shroud	Protection Screen	Phase Barrier
125A	B3	S11B1	S13S2	200mm: S081020 320mm: S081032 500mm: S081050	1st NO/NC contact 26990031	3P S073B3	3P S063B3	3P S053B3
160A	B3					4P S074B3	4P S064B3	4P S054B3
200A	B4	S11B2				3P S073B4	3P S063B4	3P S053B4
250A	B4					4P S074B4	4P S064B4	4P S054B4
400A	B5	S11J1				3P S073B5	3P S063B5	3P S053B5
630A	B5	S11J4	S13S4	200mm: S081520 320mm: S081532 400mm: S081540	2nd NO/NC contact 26990032	4P S073B5	4P S064B5	4P S054B5
800A	B6					3P S063B6		
1000A	B6					4P S064B6		
1250A	B7					3P S063B7		
1600A	B7	S11S5	S13S5	200mm: S083020 320mm: S083032	Included	4P S064B7		Included
2000A	B8					3P S063B8		
2500A	B8					4P S064B8		
3200A	B8					-		



History - Over 70 Years of Experience

For more than 70 years Gawe has represented technique, quality and service.

Today we are market leaders on the field of low voltage electrical equipment, and are recognised as a trustworthy and competent partner for the electrical sector.



LARGE FRAME MANUAL CHANGE OVER SWITCHES

According to standards:

IEC 60947-3

IEC 60947-6-1

Positive brake indication.

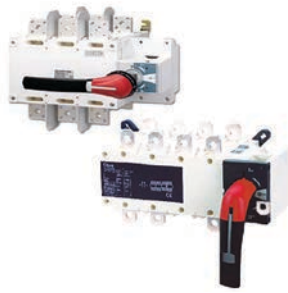
Height thermal strength.

Large number of electrical and mechanical operations.

Auxiliary contacts for control circuits.

Manual Change Overs - Handle to be ordered separately

Designed to operate in commercial and industrial industries with operational categories of AC-22, AC-23 and is used to switch between normal and high loads.

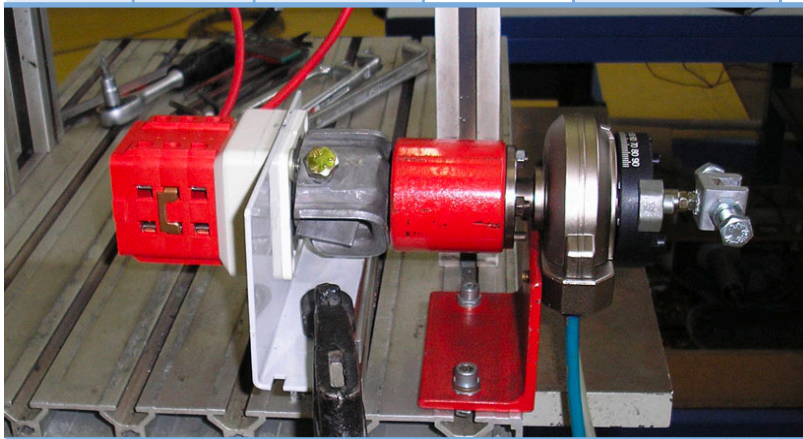


3P Code	4P Code	AC-22 415V	AC-23 415V/500V	AC-23 690V	Frame size	Size 3 Pole H x W x D	Size 4 Pole H x W x D
GAV56AC3016	GAV56AC4016	160A	160A/80A	80A	B3	135 x 221 x 148	135 x 251 x 148
GAV56AC3020	GAV56AC4020	200A	200A/80A	80A	B3	135 x 221 x 148	135 x 251 x 148
GAV56AC3025	GAV56AC4025	250A	250A/200A	125A	B4	160 x 262 x 148	160 x 312 x 148
GAV56AC3040	GAV56AC4040	400A	400A/200A	125A	B4	170 x 262 x 148	170 x 312 x 148
GAV56AC3063	GAV56AC4063	630A	630A/400A	400A	B5	260 x 319 x 225	260 x 379 x 225
GAV56AC3080	GAV56AC4080	800A	800A/630A	630A	B6	321 x 386 x 298	321 x 466 x 298
GAV56AC3100	GAV56AC4100	1000A	1000A/630A	630A	B6	321 x 386 x 298	321 x 466 x 298
GAV56AC3120	GAV56AC4120	1250A	1250A/800A	800A	B6	330 x 386 x 298	330 x 466 x 298
GAV56AC3160	GAV56AC4160	1600A	1600A/1000A	800A	B7	288 x 478 x 298	288 x 598 x 298
GAV56AC3200	GAV56AC4200	2000A	2000A/1250A	1000A	B8	380 x 478 x 425	380 x 598 x 425
GAV56AC3250	GAV56AC4250	2500A	2500A/1600A	1000A	B8	380 x 478 x 425	380 x 598 x 425
GAV56AC3320	GAV56AC4320	3200A	3200A/2000A	1250A	B8	380 x 478 x 425	380 x 598 x 425

Accessories



Size	Frame	Direct Handle	External Handle	Extension Shaft	Auxiliary Contact	Terminal Shroud	Protection Screen	Bridging Bars
160A	B3	Handle J2 S11J2	S13S2	200mm: S081020 320mm: S081032	1st and 2nd contact NO/NC 41090021	3P S073B3	3P S063B3C	1P S0410020
200A	B3					4P S074B3	4P S064B3C	
250A	B4					3P S073B4	3P S063B4C	1P S0410025
400A	B4					4P S074B4	4P S064B4C	
630A	B5					3P S073B5	3P S063B5C	
		4P S074B5	4P S064B5C					
800A	B6	Handle J3 11J3	S13S4	200mm: S081520 320mm: S081532			3P S063B6C	1P S0410080
1000A	B6					4P S064B6C		
1250A	B6					-	1P S0410120	
1600A	B7					3P S063B7C	1P S0410160	
		4P S064B7C						
2000A	B8	Handle S5 S11S5	S13S5	200mm: S083020 320mm: S083032	1st and 2nd contact NO/NC Included		Included	-
2500A	B8							
3200A	B8							



Quality - Heart to Safety and Reliability

In the different stages of production, the tests required by the regulations are carried out individually together with other additional tests determined by the technical staff.

An auditing process controls the correct functioning of the system and guarantees the reliability of the products.

NH FUSE SWITCH DISCONNECTORS

NH Fuse Switch

Size 000:
DIN Rail/Base
Mounting
Size 00, 1, 2, 3:
Base mounting
Rated Voltage:
690VAC



Fuse size	000	00	1	2	3
1 Pole Code	-	G-711	G-731	-	-
3 Pole Code	G-703	G-713	G-733	G-743	G-753
4 Pole Code	-	G-714	G-734	-	-
Current Rating	Up to 100A	Up to 160A	Up to 250A	Up to 400A	Up to 630A

NH Fuse Switch Busbar Mount

Direct installation onto
60mm busbar systems
Using 5/10mm
Busbar width see page
207-208
Rated Voltage:
690VAC



Fuse size	00	1	2
3 Pole Code	G-713PC	G-733PC	G-743PC
Current Rating	Up to 160A	Up to 250A	Up to 400A

Easy direct installation by snapping onto the busbars.

Touch protection **IP20** - when fuse link is in test mode IP rating is maintained.

INDUSTRIAL FUSE HOLDERS

Fuse Holders

Rated Voltage: 690VAC

- High insulation voltage rating.
- Resistant to abnormal heat and fire (Glow wire flammability test at 960 °C according to IEC 695-2-1).
- Elevated vibration withstand.



Fuse Size (mm)	10 x 38	14 x 51	22 x 58
1 Pole Code	G-211	G-221	G-231
2 Pole Code	G-212	G-222	G-232
3 Pole Code	G-213	G-223	G-233
3 P+N Code (c/w neutral link)	G-213N	G-223N	G-233N

1000VDC FUSEHOLDERS

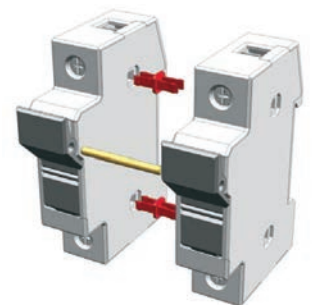
Fuse Holders for DC Applications

Code	Thermal Rating	Fuse Size	Poles	Width
211PV	20A	10 x 38	1 Pole	18mm
221PV	50A	14 x 51	1 Pole	27mm

Accessories

Code	Description
21KE	Multipole assembly kits

- According To**
- IEC 60947-1
 - IEC 60947-3
- Characteristics**
- 1000VDC - DC-20B
 - Mounting 35mm DIN rail
 - High temperature resistant plastics
 - Elevated insulation characteristics



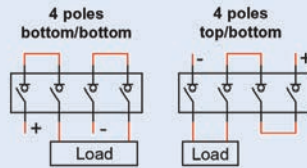
For multipole fuse holders use multipole assembly kits - **21KE**



NEW

HIGH RATING DC ISOLATORS

Series **55DC / 55PV** switch-disconnectors are manually operated load break switches that provide safety isolation for any high voltage DC circuit in photovoltaic applications. **Series bridges, handle & shaft to be ordered seperately.**



- Visual indication of contact position
- High thermal and dynamic withstand
- Operational load duty categories DC-21 and DC-22

According to Standards

- IEC 60947-3
- IEC 60364-7-712
- EN 60947-3
- DIN VDE 0126
- VDE 0660-107 (1992)
- IEC 60364-4-410 9

Code	Rated Current @ 220VDC	Rated Current @ 400VDC	Rated Current @ 600VDC	Rated Current @ 800VDC	Rated Current @ 1000VDC	Ui	Uimp
55DC4014	125ADC	125ADC	80ADC	63ADC	-	1000V	8kV
55DC4026	250ADC	250ADC	125ADC	125ADC	-	1000V	8kV
55PV4012	-	-	-	-	125ADC	1000V	12kV
55PV4016	-	-	-	-	160ADC	1200V	12kV

Accessories for specific types

Accessories for all types

Type	Internal Handle	External Handle + Shaft	Series Bridge	Terminal Screen	Shaft Extender	Auxilliary Contacts	Inter Phase Barrier
55DC4014	26995042	55K1G200	41DC4014	26984012	14001020 (200m)	26990031(1NO/1NC)	-
55DC4026	26995052	55K1G200	41DC4026	26984020	14001025 (250m)	26990032(2NO/2NC)	-
55PV	26995052	55K1G200	-	26984020	14001032 (320m) 14001050 (500m)	-	29980024



IP20
Finger safe



Series links
mounted in factory

Panel Mount DC Isolator - DC21 - Uimp = 4kV

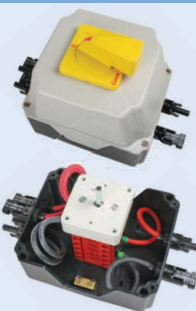
Code	Rated Current @ 300VDC	Rated Current @ 400VDC	Rated Current @ 600VDC	Rated Current @ 800VDC	Rated Current @ 1000VDC	Panel Depth (mm)
A-5342PVO	35A	-	-	-	-	60
A-5362PVO	-	25A	15A	-	-	72
A-5382PVO	-	-	25A	10A	-	83
A-5102PVO	-	-	-	-	25A	95

- Double breaking mechanism - Avoids arcing independant of operator turning speed or pressure
- Contacts in series to optimize electrical characteristics | External series links mounted in factory
- Silver alloy contacts - For additional mounting accessories see page 231

Enclosed DC Isolators IP65 - Use standard MC4 connectors



Padlockable Handle Available



Code	Rated Current @ 300VDC	Rated Current @ 400VDC	Rated Current @ 600VDC	Rated Current @ 800VDC	Rated Current @ 1000VDC	Size (mm)
A-5342MC7	35A	-	-	-	-	160 x 130 x 155
A-5362MC7	-	25A	15A	-	-	160 x 130 x 155
A-5382MC7	-	-	25A	10A	-	160 x 130 x 155
A-5102MC7	-	-	-	-	25A	160 x 130 x 155

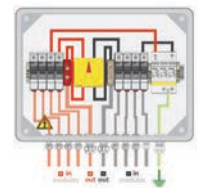
- Original and compact design
- Enclosure UV resistant
- 1 MC4 Output (+ & -)
- Base Mounting
- Simple & fast plugin
- 2 MC4 Input (+ & -)

String Boxes for Grid-Tied Systems - IP65

High voltage string boxes are enclosures where PV arrays are electrically connected and where the isolation function is performed in order to permit maintenance work to be done. Junction boxes are supplied complete with fuse, surge and overload protection.

According to Standards

- IEC 60634-7-712 • IEC 60943-7-3 • EN 61439-1-2 • IEC61643-11



Code	Strings	Voltage	Isc	Surge Protection	Size (mm)	Gland Size
ST039025P	3	1000VDC	25A	Class 2 1000VDC	225 x 305 x 130	M12 / M16
ST049025P	4	1000VDC	25A	Class 2 1000VDC	285 x 380 x 185	M12 / M16
ST068060P	6	800VDC	63A	Class 2 1000VDC	285 x 570 x 185	M12 / M16
ST106080P	10	600VDC	80A	Class 2 1000VDC	380 x 570 x 185	M12 / M16
ST101010P	10	1000VDC	125A	Class 2 1000VDC	405 x 650 x 200	M12 / M16
ST148012P	14	800VDC	125A	Class 2 1000VDC	380 x 760 x 225	M12 / M16
SH161012	16	1200VDC	160A	Class 2 1500VDC	760 x 380 x 225	M12 / M16

COMBILIGHT SWITCHES



The innovation that transforms electrical panel designs

The new generation of illuminated switches revolutionizes design of electrical panels by providing design and installation simplicity, electrical and electronic robustness, modern ergonomics and high signalling brightness.



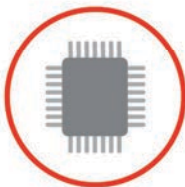
Electrical Robustness

Safety and reliability in any circumstance.
According to IEC60947-3. Electrical endurance (3 times above standard requirements).
On load switching and circuit isolation



High brightness

Unmatched unit visibility in outdoor or bright environments. Long life LEDs 100.000 hours. Visibility throughout 180°. High intensity LEDs. True colors complete range. Black background for enhanced contrast



Electronic Robustness

Reliability against disturbances.
Protection against electromagnetic interference
High resistance to vibration and shock
High dielectric strength



Ergonomics

Designed for easy of use.
Handle developed for type 2 motion movements.
Surface treatment for a touch of comfort.
Modern look.



Simplicity

Guaranteed time saving.
Built-in Fixing Nuts
Plug-in power supply terminal
Clip-together handle system







Connection

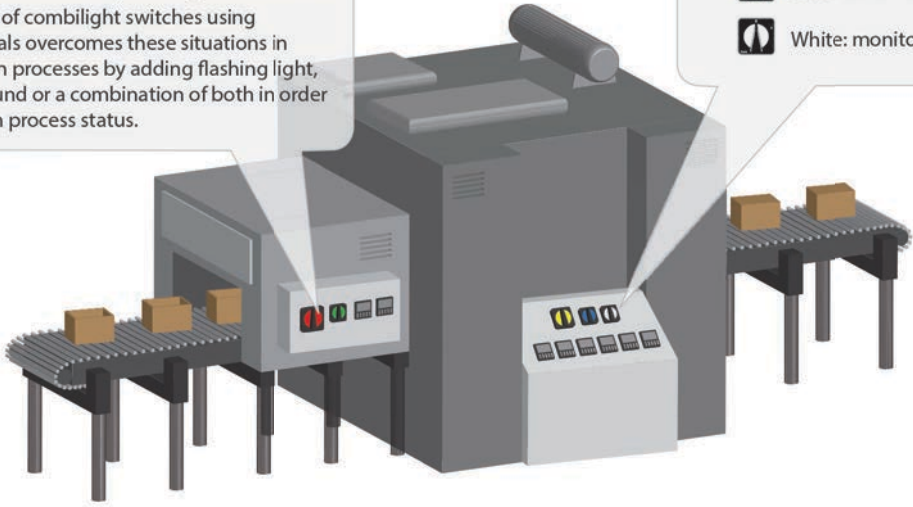
Clamping yoke terminal technically recognised as the best connection.
Reliability against temperature changes and vibrations. Captive screw. Surface treatment minimizes contact resistance.

COMBILIGHT SWITCHES

Additional signalling
A common signalling need occurs when discrepancies rise between control command and the actual process status. This may indicate, for example, the end of the process cycle where an operator action is required (eg load material).
The range of combilight switches using input signals overcomes these situations in production processes by adding flashing light, buzzer sound or a combination of both in order to warn on process status.

Intuitive indications
Human-machine interface requires a clear understanding of the situation by the operator, colour coding provides a quick understanding.

-  Red: emergency
-  Green: normal status
-  Yellow: anomaly (check or action required)
-  Blue: action required
-  White: monitoring



Programmable modules
Comblight switches technology distinguishes itself by offering maximum flexibility to OEM designers in the conception of new products and developments. Signalling modules are based on a programmable chip that uses four input signals and combinations thereof. They can be programmed colour lights, colour sequences, blinking frequencies, buzzer frequencies. Each case associated with different machine status and operating conditions.


Environment
Designed to minimize the impact on the environment

- Materials of low ecological footprint and easy recycling
- Low power consumption electronics



Nothing but benefits...

- ✓ Fewer components
- ✓ Less need for space
- ✓ Economic saving
- ✓ Reduced installation time



“A complete range of expert solutions adapted to telecom particular needs”

Gawe Electro has become a leading supplier providing components and solutions to the tower telecom industry. The fast evolution of telecom technologies emphasizes the need for a supplier that understands present and future needs, spotting market trends and developing advanced products that offer real added value solutions.



Low voltage p components

Electrical circuits on require multiple dev to guarantee safe an operation. An exten components is avail cost-effective prote and sophisticated c equipment.

- Surge protector de**
- Class I - High disc
 - Class II - Medium
 - Class III - Fine pro
- Fuse protection**



Combined energy sources

BTS stations may combine multiple energy sources that will guarantee power availability on the transceiver.

Multiple designs are possible running from the basic manual switching between two power sources, through the widely implemented motorised changeover switches and ending with complex switching layouts between three independent sources. The system is designed to switch always to the most economic generation source and therefore Opex costs will be minimised.

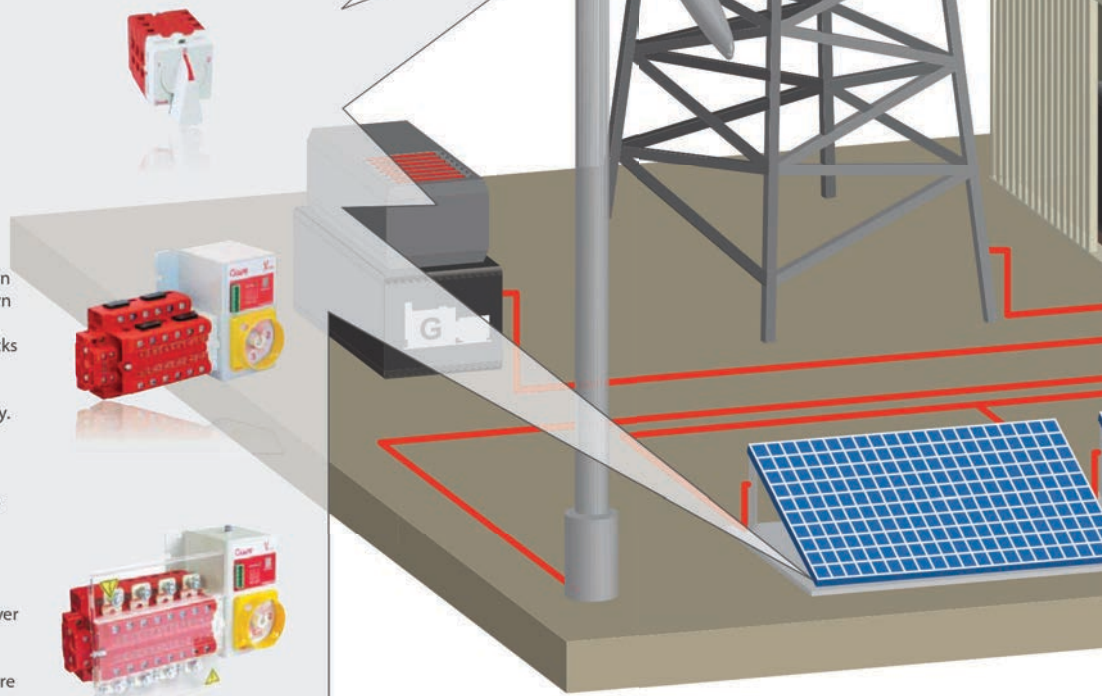
2 or 3 Sources Motorised changeover switches

Automatic transfers using motorised changeover switches are the right solution that minimises investment while not compromising system reliability and safety.

Energy supply on telecom towers are characterised by constant switching operations which require high electromechanical characteristics. Y series motorised changeover switches are based on rotary cam technology which is widely known by its outstanding electrical endurance. Integrated mechanical and electrical interlocks ensure system safety and circuit isolation. Stable mechanical positions (coil free) avoid problems related to supply voltage instability.


Remote/Local

Most common telecom facilities integrate control systems that run on automatic mode and operate remote switching operations. System design may consider providing and additional circuit to manually perform switching during maintenance or test operations. When using motorised changeover switches system design is simplified into a single unit that integrates remote and manual local operation. Significant savings are achieved by reducing number of components, installation time and panel space. Capex investment is minimised.



INFORMATION

Power Distribution Panel



telecom towers
services in order
and reliable
wide range of panel
able to provide
action on expensive
communications

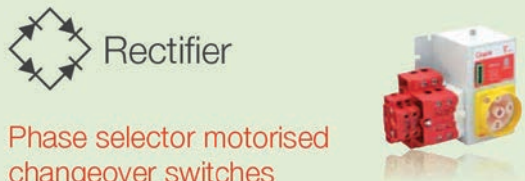
- Cylindrical and NH.

Control relays

- Phase sequence, failure, voltage, current, temperature.

Network monitoring relays – RF04
Network monitoring is about getting the right information on time and controlling the events sequence. RF04 is a programmable device that offers you constant readout on network status and actuates on output relays according to preset values.


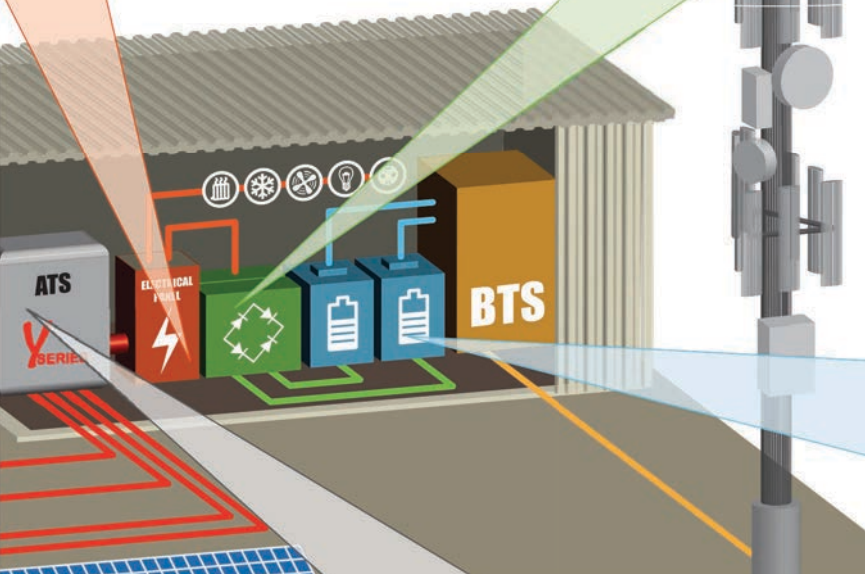
Rectifier



Phase selector motorised changeover switches

Associating phase monitor relays with motorised phase selector switches is an innovative solution that reduces the number of rectifiers from 6 units in a typical installation down to just 2 units. Capital investment is therefore significantly reduced.

On those installations where a minimum of two rectifiers need to operate simultaneously we can use double channel motorised phase selector switches.

Batteries



Overlapping motorised changeover switches

Batteries supplying power to the BTS find an ideal solution on motorised overlapping changeover switches that switch between 2 or 3 battery banks without electrical break thus guaranteeing power supply continuity.

Local manual operation is also of great value during battery maintenance and replacement operations. Operating handle can be padlocked to safeguard switch position.

Automatic Transfer Switch (ATS)



Telecom ATS

Transfer switches are at the heart of an emergency power system where reliable remote electrical operation can be overridden by direct manual operation.

Based on the installation characteristics we determine which transfer is most suitable to our needs.

Main criteria to be considered are number and type of power sources, maintenance operations and test functionality. Telecom stations with heavy traffic should always include by-pass systems to guarantee power supply continuity during maintenance operations.

Y series customised solutions manage to integrate the maximum number of electrical circuits and functionalities within the most confined space. Total investment is significantly reduced without compromising installation performance.

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