

COMMAND Series

SWITCH DISCONNECTORS - 16A-160A



VERSIONS

	Switch size Y1 Rear panel version (R) Rear panel mounting screws fixing
	Switch size Y2 Rear panel version (R) Rear panel mounting screws fixing
	Switch size Y1 Box version (B) Base mounting DIN rail fixing
	Switch size Y2 Box version (B) Base mounting DIN rail fixing
	Switch size Y3 Box version (B) Base mounting DIN rail fixing or screws fixing
	Switch size Y4 Box version (B) Base mounting DIN rail fixing or screws fixing
	Switch size Y5 Box version (B) Base mounting DIN rail fixing or screws fixing

REFERENCE STANDARDS

EN 60947-3
Low voltage switchgear and controlgear.
Part 3: switches, disconnectors, switch-disconnectors and fuse-combination unit.

UL 508
Industrial control equipment.

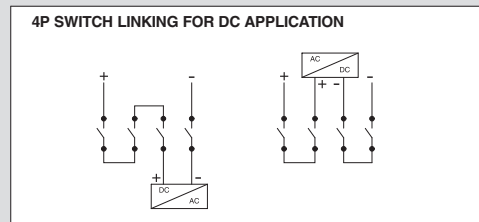
QUALITY MARKS



For specific quality marks please contact our technical service.

TECHNICAL CHARACTERISTICS

Polarity:	2P - 3P- 3P+N - 4P - 6P - 8P
Rated current:	16A* - 20A - 25A* - 32A - 40A - 63A - 80A - 100A - 125A - 160A
Rated voltage:	0-690Vac - 0-600Vdc
Frequency:	50-60Hz
Insulating voltage:	690Vac
Protection degree:	IP65 (front operator)
Operating ambient temperature according to the reference standard:	-25°C+40°C
Max operating ambient temperature:	60°C
Glow wire test:	850°C
DIN rail fixing:	Yes
Front panel fixing:	Yes (only 16A-20A-32A-40A-63A-80A)
Connectable auxiliary contacts:	Yes
3P+N with late break early make neutral pole. Front operators box version equipped with door locking in ON position. Padlockable handle. * Only for 6 and 8 poles.	



TECHNICAL CHARACTERISTICS 2P, 3P, 3P+N, 4P

Switch size		Y1				Y2		Y4		Y5		
Rated current In		16A	20A	32A	40A	63A	80A	100A	125A	160A		
Rated insulation voltage	Ui	VAC	690	690	690	690	690	690	800	800	800	
Rated impulse withstand voltage	Uimp	kV	4	4	4	4	4	8	8	8		
Thermal current	Ith/lthe	A	30	30	40	40	63	86	100	125	160	
Rated operational current - Ie	AC21A Resistive loads, including moderate overloads	415V	A	16	20	32	40	63	80	100	125	160
		500V	A	16	20	32	32	63	80	100	125	160
		690V	A	16	20	32	32	63	80	100	125	160
	AC22A Mixed resistive and inductive loads, including moderate overloads	415V	A	16	20	32	40	63	80	100	125	160
		500V	A	16	20	32	32	63	80	100	125	160
		690V	A	16	20	32	32	63	80	-	125	160
	AC23A Switching of motor loads or other highly inductive loads (3 phase / 3 pole)	415V	A	16	20	32	35	63	67	100	125	160
		500V	A	16	20	25	25	40	67	-	125	125
		690V	A	16	20	25	25	30	38	-	100	100
	AC23 Rated operational power (°)	415V	Kw	7.5	9	15	18.5	33	37	46	55	69
	AC3 Squirrel-cage motor: starting, switching off motor during running (3 phase / 3 pole)	415V	A	18	18	25	28.5	40	55	-	-	-
		690V	A	-	12	18	20	25	32	-	-	-
DC22A Mixed resistive and inductive loads, including moderate overloads	250V	A	-	25(*)	32(*)	32(*)	-	-	-	-	-	
	600V	A	-	10(*)	10(*)	10(*)	-	-	-	-	-	
Rated short time withstand current	Icw (1s)	A	400	400	400	400	1500	1500	1500	3000	3000	
Conditional short circuit current	KAeff	10	10	10	10	10	10	30	50	50		
Associate fuse size for conditional short circuit current - Type gG	A	16	20	32	40	63	80	100	125	125		
Flexible wire	mm²	1.5-10	1.5-10	1.5-10	1.5-10	10-35	10-35	10-50	10-70	10-70		
Rigid wire	mm²	1.5-16	1.5-16	1.5-16	1.5-16	10-35	10-35	10-50	10-70	10-70		

(*) Only 4P with 2+2 poles in series.

(°) This values are given for guidance and may vary according to the specifics provided by the motor manufacturer.

TECHNICAL CHARACTERISTICS 6P, 8P

Switch size		Y3				Y4			Y5			
Rated current In		16A	25A	32A	40A	63A	80A	100A	125A	160A		
Rated insulation voltage	Ui	VAC	800	800	800	800	800	800	800	800		
Rated impulse withstand voltage	Uimp	kV	8	8	8	8	8	8	8	8		
Thermal current	Ith/lthe	A	16	25	32	40	63	80	100	125	160	
Rated operational current - Ie	AC21A Resistive loads, including moderate overloads	415V	A	16	25	32	40	63	80	100	125	160
		500V	A	16	25	32	40	63	160	80	125	160
		690V	A	16	25	32	40	63	160	80	125	160
	AC22A Mixed resistive and inductive loads, including moderate overloads	415V	A	16	25	32	40	63	160	80	125	160
		500V	A	16	25	32	40	63	160	80	125	160
		690V	A	16	25	32	40	40	40	125	160	
	AC23A Switching of motor loads or other highly inductive loads (3 phase / 3 pole)	415V	A	16	25	32	40	63	80	100	125	160
		500V	A	16	25	32	40	63	63	63	125	125
		690V	A	16	25	25	25	32	32	32	100	100
	AC23 Rated operational power (°)	415V	kW	7.5	11	15	18.5	35	37	46	55	69
	Rated short time withstand current	Icw (1s)	A	1100	1100	1100	1100	1500	1500	1500	3000	3000
	Conditional short circuit current	KAeff	50	50	50	50	50	50	30	50	50	
Associate fuse size for conditional short circuit current - Type gG	A	16	25	32	40	63	80	100	125	125		
Flexible wire	mm²	4-25	4-25	4-25	4-25	10-50	10-50	10-50	10-70	10-70		
Rigid wire	mm²	4-25	4-25	4-25	4-25	10-50	10-50	10-50	10-70	10-70		

(°) This values are given for guidance and may vary according to the specifics provided by the motor manufacturer.

■ HIGH RATING SWITCH DISCONNECTORS - 160A-1600A



■ VERSIONS

	Switch size K2 Box version (B) Base mounting screws fixing
	Switch size K3 Box version (B) Base mounting screws fixing
	Switch size K4 Box version (B) Base mounting screws fixing
	Switch size K5 Box version (B) Base mounting screws fixing
	Switch size K6 Box version (B) Base mounting screws fixing

■ REFERENCE STANDARDS

EN 60947-3
Low voltage switchgear and controlgear.
Part 3: switches, disconnectors, switch-disconnectors
and fuse-combination unit.

■ TECHNICAL CHARACTERISTICS

Polarity:	3P-3P+N
Rated current:	160A-200A-250A-315A-400A 500A-630A-800A-1000A 1250A-1600A (*)
Protection degree:	IP65 (front operator)
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max operating ambient temperature:	+60°C

3P+N with late break early make neutral pole.
Front operators box version equipped with door locking in ON position.
Padlockable handle.
Full current neutral pole up to 1250A.
(*) Neutral pole 1250A.
Full current neutral pole available on request.

■ TECHNICAL CHARACTERISTICS 3P, 3P+N

Switch size		K2			K3			K4		K5		K6			
Rated current In		160	200	250	315	400	500	630	800	1000	1250	1600 (*)			
Rated insulation voltage	(V)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
Impulse withstand voltage	(kV)	12	12	12	12	12	12	12	12	12	12	12			
Rated thermal current	(A)	160	200	250	315	400	500	630	800	1000	1250	1600			
Rated operational current -Ie	AC21A	415V	(A)	160	200	250	315	400	500	630	800	1000	1250	1600	
	Resistive loads, including moderate overloads	500V	(A)	160	200	250	315	400	500	630	800	1000	1250	1600	
		690V	(A)	160	200	250	315	400	500	630	800	1000	1250	1250	
		415V	(A)	160	200	250	315	400	500	630	800	1000	1250	1600	
	AC22A	415V	(A)	160	200	250	315	400	500	630	800	1000	1250	1600	
		Mixed resistive and inductive loads, including moderate overloads	500V	(A)	160	200	250	315	400	400	630	800	1000	1250	1250
			690V	(A)	160	200	250	315	400	400	630	800	1000	1250	400
	AC23A	415V	(A)	160	200	250	315	400	500	630	800	1000	1250	1250	
		Switching of motor loads or other highly inductive loads (3 phase / 3 pole)	500V	(A)	125	160	200	250	315	315	500	800	800	800	800
			690V	(A)	100	125	160	200	250	250	400	400	400	400	400
AC23A Rated operational power (*)	415V	kW	85	105	130	165	200	210	330	420	525	630	630		
Rated making capacity	415V AC23	(A)	1600	2000	2500	3150	4000	4000	6300	6300	6300	6300			
Rated breaking capacity	415V AC23	(A)	1280	1600	2000	2520	3200	3200	5040	5040	5040	5040			
Short circuit withstand current 1sec		(kA)	8	8	8	13	13	13	26.5	35	35	35	60		
Short circuit withstand current 0.25 sec		(kA)	16	16	16	26	26	26	53	70	70	70	120		
Short circuit making capacity	415V	(kA)	13.5	13.5	13.5	26	26	26	30	73.5	73.5	73.5	105		
Rated fuse short-circuit current	Back up fuse	(A)	160	200	250	315	400	400	630	800	1000	1000	-		
	R.M.S value	(kA)	100	50	50	50	50	50	50	100	100	100	-		
	Peak value	(kA)	16	20	25	25	30	30	40	70	90	100	-		
Flexible wire	mm ²	120	120	120	185	2x150	2x150	2x185	2x240	-	-	-			
Bars dimension	mm	20x5	20x5	20x5	2x (25x4)	2x (25x4)	2x (25x4)	2x (32x6)	2x (50x5)	2x (50x6)	2x (50x8)	2x (80x102)			

(*) Neutral pole 1250A

Full current neutral pole available on request.

(*) This values are given for guidance and may vary according to the specifics provided by the motor manufacturer.




CHANGE-OVER SWITCHES I/O/II - 16A-160A



REFERENCE STANDARDS

EN 60947-3
 Low voltage switchgear and controlgear.
 Part 3: switches, disconnectors, switch-disconnectors
 and fuse-combination unit.

VERSIONS

	Switch size Y3 Box version (B) Base mounting DIN rail fixing or screws fixing
	Switch size Y4 Box version (B) Base mounting DIN rail fixing or screws fixing
	Switch size Y5 Box version (B) Base mounting DIN rail fixing or screws fixing

TECHNICAL CHARACTERISTICS

Polarity:	3P-3P+N
Rated current:	16A-25A-32A-40A-63A 80A-100A-125A-160A
Protection degree:	IP65
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max operating ambient temperature:	+60°C
3P+N with late break early make neutral pole. Front operators box version equipped with door locking in ON position. Padlockable handle.	

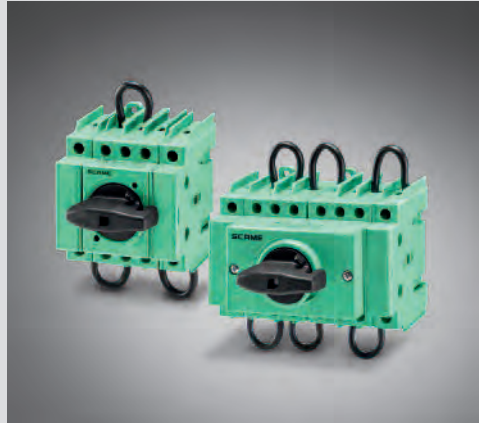
TECHNICAL CHARACTERISTICS 3P, 3P+N

Switch size	Y3										Y4			Y5	
	Rated current In	16A	25A	32A	40A	63A	80A	100A	125A	160A	63A	80A	100A	125A	160A
Rated insulation voltage	Ui	VAC	800	800	800	800	800	800	800	800	800	800	800	800	800
Rated impulse withstand voltage	Uimp	kV	8	8	8	8	8	8	8	8	8	8	8	8	8
Thermal current	Ith/Ithe	A	16	25	32	40	63	80	100	125	160	160	160	160	160
Rated operational current - Ie	AC21A Resistive loads, including moderate overloads	415V	A	16	25	32	40	63	80	100	125	160	160	160	160
		500V	A	16	25	32	40	63	160	80	125	160	160	160	
		690V	A	16	25	32	40	63	160	80	125	160	160	160	
	AC22A Mixed resistive and inductive loads, including moderate overloads	415V	A	16	25	32	40	63	160	80	125	160	160	160	160
		500V	A	16	25	32	40	63	160	80	125	160	160	160	
		690V	A	16	25	32	40	40	40	40	125	160	160	160	
	AC23A Switching of motor loads or other highly inductive loads (3 phase / 3 pole)	415V	A	16	25	32	40	63	80	100	125	160	160	160	160
		500V	A	16	25	32	40	63	63	63	125	125	125	125	
		690V	A	16	25	25	25	32	32	32	100	100	100	100	
Rated short time withstand current	Icw (1s)	A	1100	1100	1100	1100	1500	1500	1500	3000	3000	3000	3000	3000	
Conditional short circuit current	KAeff		50	50	50	50	50	50	30	50	50	50	50		
Associate fuse size for conditional short circuit current - Type gG	A		16	25	32	40	63	80	100	125	125	125	125		
Flexible wire	mm ²		4-25	4-25	4-25	4-25	10-50	10-50	10-50	10-70	10-70	10-70	10-70		
Rigid wire	mm ²		4-25	4-25	4-25	4-25	10-50	10-50	10-50	10-70	10-70	10-70	10-70		

APPLICATION EXAMPLES



PHOTOVOLTAIC/DC SWITCH DISCONNECTORS - 450-800 DC



REFERENCE STANDARDS

EN 60947-3
Low voltage switchgear and controlgear.
Part 3: switches, disconnectors, switch-disconnectors and fuse-combination unit.

IEC 60364-7-712
Requirements for special installations or locations
Solar photovoltaic (RV) power supply systems.

VERSIONS

	Switch size Y1 Box version (B) Base mounting DIN rail fixing
	Switch size Y3 Box version (B) Base mounting DIN rail fixing or screws fixing
	Switch size Y5 Box version (B) Base mounting DIN rail fixing or screws fixing

TECHNICAL CHARACTERISTICS

Poles in series:	4P-5P-6P-8P
Rated current (800V):	10A-15A-16A-20A-25A-30A-40A
Protection degree:	IP65 (front operator)
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max operating ambient temperature:	+60°C

Front operators box version equipped with door locking in ON position. Padlockable handle.

Scame embraces completely the renewable energy sources philosophy and the respect for the environment. In our production plant and office building we have installed 250kWp of photovoltaic system. We follow up this field in several countries with a wide range of products. From our experience is born the new range of DC Isolators specific for photovoltaic systems. In according to the IEC 60364-7-712, in every photovoltaic installation it is necessary to isolate the photovoltaic panel from the rest of the system, DC Isolators must have a higher performance than the traditional AC Isolators because breaking direct current is more difficult than breaking alternating current, and furthermore in a photovoltaic system the voltage can reach even 800V.

The current and voltage values changes depending on the combination of the photovoltaic cells. DC Isolator range has been set up focusing on all of the main photovoltaic installations in order to get a range as essential as possible, simplify the choice of the customer and for have the maximum quality and technical characteristics. In the meantime we are improving and up grading constantly our products, following and anticipating the change that the market requires due to the incentives available. Scame ISOLATORS Series includes also a complete range of AC Isolators, essential to make a photovoltaic system in compliance with IEC 60364-7-712. Finally in the photovoltaic range it is available a huge range of water tight cabinets and consumer unit suitable for make distribution board & export control.

TECHNICAL CHARACTERISTICS 4P-5P-6P-8P

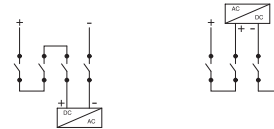
Switch size		Y1	Y3				Y5	
Rated current In		16A	15A	20A	25A	30A	40A	
Rated insulation voltage	Ui	VAC	690	1500	1500	1500	1500	
Rated impulse withstand voltage	Uimp	kV	4	8	8	8	8	
Thermal current	Ith/lthe	A	30	63	63	63	125	
Number of poles in series			4	4	5	6	8	
Rated operational current —Ie	DC21A Resistive loads, including moderate overloads	300V	A	32	-	-	-	-
		400V	A	-	30	35	40	60
		450V	A	16	-	-	-	-
		500V	A	-	30	35	40	45
		600V	A	-	20	25	40	40
		750V	A	-	15	20	25	30
		800V	A	-	15	20	25	30
Rated short time withstand current	Icw (1s)	A	400	1100	1100	1100	3000	
Flexible wire		mm ²	1.5-10	16	16	16	70	
Rigid wire		mm ²	1.5-10	16	16	35	70	

POSSIBLE CONTACT WIRINGS

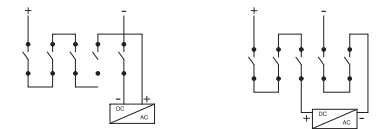
SWITCH LINKING

In order to make easier the work of the installer, it is possible to choose the manner of wiring of the poles in series. In this way the incoming and the outgoing can be varied both on the top side and on the bottom side. In the packaging jumpers are supplied to cover the chosen configuration.

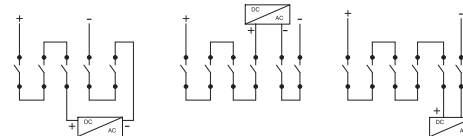
590.DC0815 - 590.DC0416 - (4 POLES IN SERIES) - 3 JUMPERS SUPPLIED



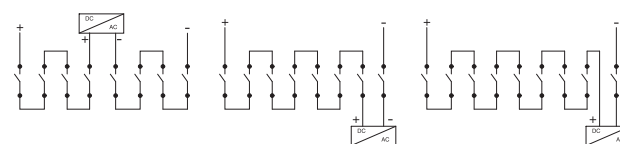
590.DC0820 - (5 POLES IN SERIES) - 4 JUMPERS SUPPLIED



590.DC0825 - (6 POLES IN SERIES) - 5 JUMPERS SUPPLIED



590.DC0830 - 590.DC0840 - (8 POLES IN SERIES) - 8 JUMPERS SUPPLIED



SWITCH DISCONNECTORS WITH FUSES - 16A-630A



VERSIONS

	Switch size YF1 Box version (B) Base mounting DIN rail fixing
	Switch size KF1 Box version (B) Base mounting screws fixing
	Switch size KF2 Box version (B) Base mounting screws fixing
	Switch size KF3 Box version (B) Base mounting screws fixing
	Switch size KF4 Box version (B) Base mounting screws fixing
	Switch size KF5 Box version (B) Base mounting screws fixing

REFERENCE STANDARDS

EN 60947-3
Low voltage switchgear and controlgear.
Part 3: switches, disconnectors, switch-disconnectors
and fuse-combination unit.

TECHNICAL CHARACTERISTICS

Polarity:	2P-3P-3P+N (16A-32A) 3P-3P+N (63A-100A-125A-160A- 200A-250A-315A-400A-630A)
Rated current:	16A-32A-63A-100A-125A-160A- 200A-250A-315A-400A-630A
Protection degree:	IP65 (front operator)
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max operating ambient temperature:	+60°C
3P+N with late break early make neutral pole. Front operators box version equipped with door locking in ON position. Padlockable handle.	

TECHNICAL CHARACTERISTICS 2P,3P, 3P+N

Switch size			YF1		KF1		KF2		KF3		KF4		KF5		
	Rated current In		16A	32A	63A	80A	100A	125A	160A	200A	250A	315A	400A	630A	
Rated insulation voltage	Ui	VAC	690	690	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
		VDC	400	400	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
		kV	4	4	8	8	12	12	12	12	12	12	12	12	
Rated impulse withstand voltage	Uimp	kV	4	4	8	8	12	12	12	12	12	12	12		
Thermal current	Ith/Ithe	A	25	32	63	80	100	125	160	200	250	315	400	630	
Rated operational current - Ie	AC21A Resistive loads, including moderate overloads	400V	A	-	-	63	80	100	125	160	200	250	315	400	630
		500V	A	-	-	63	80	100	125	160	200	250	315	400	630
		690V	A	25	32	63	80	100	125	160	200	250	315	400	630
	AC22A Mixed resistive and inductive loads, including moderate overloads	400V	A	-	-	63	80	100	125	160	200	250	315	400	630
		500V	A	-	-	63	80	100	125	160	200	250	315	400	630
		690V	A	30	32	63	80	100	125	160	200	250	315	400	630
	AC23A Switching of motor loads or other highly inductive loads (3 phase / 3 pole)	400V	A	-	-	63	80	100	125	160	200	250	315	400	630
		500V	A	-	-	45	63	80	100	125	160	200	250	315	500
		690V	A	16	25	32	45	63	80	100	125	160	200	250	400
	DC21A Resistive loads, including moderate overloads	220V	A	25	32	63	80	100	125	160	200	250	315	400	630
		400V	A	-	-	-	-	100	125	160	200	250	315	400	630
		600V	A	-	-	-	-	-	-	-	-	-	315	400	630
DC22A Mixed resistive and inductive loads, including moderate overloads	220V	A	20	32	63	80	100	125	160	200	250	315	400	630	
	400V	A	-	-	-	-	100	125	160	200	250	315	400	630	
	600V	A	-	-	-	-	-	-	-	-	-	315	400	630	
DC23A Switching of highly inductive loads (e.g. series motors)	220V	A	-	-	50	50	100	125	160	160	160	250	250	400	
	400V	A	-	-	-	-	100	125	160	-	-	-	-	-	
Short circuit protection	Conditional short circuit current	KAeff	10	10	100	100	50	50	50	50	50	50	50	50	
	Associate fuse size for conditional short circuit current	A	16	32	63	80	100	125	160	200	250	315	400	630	
	Fuse type		gG	gG	DIN/BS	DIN/BS	DIN/BS	DIN/BS	DIN/BS	DIN/BS	DIN/BS	DIN/BS	DIN/BS	DIN/BS	
Rated making capacity at 420V c.a. cos 0,35 (0,45°)		A	160	320	630	800	1000	1250	1600	2000	2500	3150	4000	6300	
Rated making capacity at 420V c.a. cos 0,35 (0,45°)		A	-	-	504	640	800	1000	1280	1600	2000	2520	3200	5040	
Flexible wire	mm ²		1,5-10	1,5-10	25	25	70	70	70	120	120	240	240	2x185	
	AWG		16-8	16-8											
Bars dimension	mm		-	-	12x3	12x3	16x4	16x4	16x4	25x4	25x4	32x5	32x5	2x40x6	