



GC 25

509862

### **Presentation**

TeSys GC contactors are designed for use in modular panels and enclosures.  
These contactors feature:

#### ■ Easy installation

- quick clip-on fixing and locking onto 35 mm omega rail,
- easy connection by means of ready-to-tighten, captive, pozidrive screw terminals.

#### ■ Compact size

All units have a common depth of 60 mm and width in modules of 17.5 mm (width of one module: 17.5 mm).

#### ■ User safety

- use of materials conforming to strictest fire safety standards,
- live parts protected against direct finger contact,
- completely safe operation,
- state indication on front panel.

### **Standards**

This range of modular contactors has been designed taking into account the requirements of international standard IEC 61095.

This standard is specific to "Electromagnetic contactors for domestic and similar use".

It has very strict requirements, meeting the expectations of users, with regard to the safety of equipment and persons in "premises and areas accessible to the public". Conformity with this standard makes it possible to obtain the following quality labels without the need for additional tests: NF-USE, VDE, CEBEC, etc.

### **Applications**

TeSys GC modular contactors are designed for switching all single-phase, 3-phase or 4-phase loads up to 100 A.

### **Power switching**

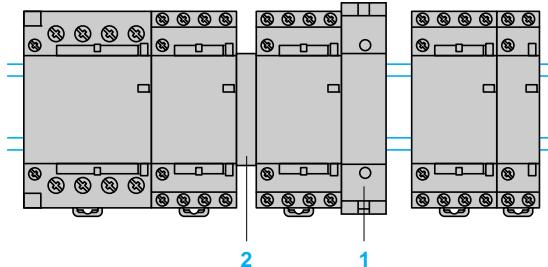
These contactors have multiple applications in industrial, agricultural and commercial premises, hospitals and the home, i.e. wherever switching of a specific supply is required:

- lighting,
- heating,
- ventilation,
- motorised shutters or gates.

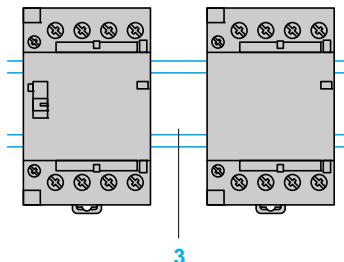
**Setting-up precautions**

The contactor controls must be bounce free. If not, connect a coil suppression block 1 (GAP 21, 22 or 23) across the coil terminals  $\leq 250$  V.

When several contactors which operate at the same time are mounted side by side, a GAC 5 ventilation 1/2 module 2 must be fitted every 2 contactors.



It is advisable to mount electronic units at the bottom of the modular panel and to separate them from electromechanical units by a space 3 equal to one module, or by 2 ventilation 1/2 modules (GAC 5).



Derating of contactors mounted in a modular enclosure if the temperature within the enclosure is  $> 40$  °C

Contactor rating	40 °C	50 °C	60 °C (1)
16 A	16 A	14 A	13 A
25 A	25 A	22 A	20 A
40 A	40 A	36 A	32 A
63 A	63 A	57 A	50 A
100 A	100 A	87 A	80 A

(1) Ventilation 1/2 module must be fitted

Contactor type		GC16	GC25	GC40	GC63	GC100
<b>Environment</b>						
Rated insulation voltage (Ui)	Conforming to IEC 61095 Conforming to VDE 0110	V	500			
Rated impulse withstand voltage (Uiimp)		kV	4 in enclosure			
<b>Conforming to standards</b>						
<b>Product certifications</b>						
Degree of protection	Conforming to VDE 0106		Protection against direct finger contact (IP 20 open, IP 40 in enclosure)			
Protective treatment	Standard version		"TC"			
Ambient air temperature around the device	Storage Operation	°C	- 40...+ 70 - 5...+ 50 (0.85...1.1 Uc)			
Maximum operating altitude	Without derating	m	3000			
Operating positions	Without derating		± 30° in relation to normal vertical mounting plane			
Shock resistance 1/2 sine wave = 10 ms	Contactor open Contactor closed		10 gn 15 gn			
Vibration resistance 5...300 Hz	Contactor open Contactor closed		2 gn 3 gn			
Flame resistance			Conforming to IEC 61095			
<b>Pole characteristics</b>						
Number of poles			2, 3 or 4			
Rated operational current (Ie) (Ue ≤ 440 V)	In AC-7a (heating) In AC-7b (motor control)	A	16 5	25 8.5	40 15	63 25
Rated operational voltage (Ue)	Up to	V	250 two-pole contactors, 415 three and four-pole contactors			
Frequency limits	Of the operating current	Hz	400			
Conventional thermal current (Ith)	0 ≤ 50 °C	A	16	25	40	63
Rated breaking and making capacity	Conforming to IEC 61095 (AC-7b) I rms 400 V 3-phase	A	40	68	120	200
Permissible short time rating no current flowing for preceding 15 minutes with θ ≤ 40 °C	For 10 s For 30 s	A	128 40	200 62	320 100	504 157
Short-circuit protection by fuse or circuit breaker U ≤ 440 V	gl fuse Circuit-breaker I <sup>2</sup> t 230 V (at 3 kA rms 400 V prospective)	A A <sup>2</sup> s	16 5000 9000	25 10 000 14 000	40 16 000 17 500	63 18 000 20 000
Average impedance per pole	At Ith and 50 Hz	mΩ	2.5	2.5	2	2
Power dissipated per pole	For the above operational currents	W	0.65	1.6	3.2	8
Maximum cabling c.s.a.	Flexible cable without cable end	1 conductor 2 conductors	mm <sup>2</sup> mm <sup>2</sup>	6 4	6 4	25 16
	Flexible cable with cable end	1 conductor 2 conductors	mm <sup>2</sup> mm <sup>2</sup>	6 1.5	16 4	16 4
	Solid cable without cable end	1 conductor 2 conductors	mm <sup>2</sup> mm <sup>2</sup>	6 4	25 6	35 10
	Tightening torque	Power circuit connections	N.m	0.8	0.8	3.5
Selection : pages 20003/2 to 20003/5		References : pages 20005/2 and 20005/3		Dimensions, schemes : pages 20006/2 and 20006/3		

Contactor type		GC16, GC25 single or 2-pole	GC16, GC25 3 or 4-pole GC40, GC63 2-pole	GC40, GC63 3 or 4-pole GC100 2-pole	GC100 4-pole
<b>Control circuit characteristics</b>					
Rated control circuit voltage (Uc)	50 or 60 Hz	V	12...240 V, for other voltages, please consult your Regional Sales Office		
Control voltage limits (0 ≤ 50 °C)	50 Hz coils Operational Drop-out		0.85...1.1 Uc 0.2...0.75 Uc		
Average coil consumption at 20 °C and at Uc	~ 50 Hz Inrush Sealed	VA	15 3.8	34 4.6	53 6.5
Maximum heat dissipation	50/60 Hz	W	1.3	1.6	2.1
Operating time	Closing "C" Opening "O"	ms	10...30 10...25		
Mechanical durability	In operating cycles		10 <sup>6</sup>		
Maximum operating rate at ambient temperature ≤ 50 °C	In operating cycles per hour		300		
Maximum cabling c.s.a.	Flexible cable without cable end	1 or 2 conductors	mm <sup>2</sup>	2.5	
	Flexible cable with cable end	1 conductor 2 conductors	mm <sup>2</sup>	2.5 1.5	
	Solid cable without cable end	1 or 2 conductors	mm <sup>2</sup>	1.5	
Tightening torque		N.m	0.8		
<b>Instantaneous auxiliary contact characteristics</b>					
Rated operational voltage (Ue)	Up to	V	250		
Rated insulation voltage (Ui)	Conforming to IEC 60947-5	V	500		
	Conforming to VDE 0110	V	500		
Conventional thermal current (Ith)	For ambient 0 ≤ 50 °C	A	5		
Mechanical durability	Operating cycles		10 <sup>6</sup>		
Maximum cabling c.s.a.	Flexible or solid conductor	mm <sup>2</sup>	2.5		
Tightening torque		N.m	0.8		

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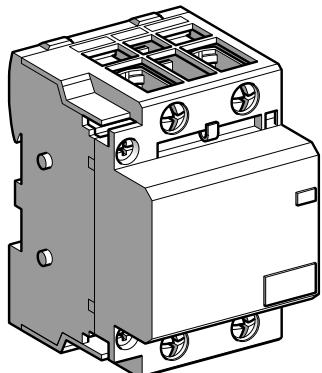


GC 2520

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GC 4040



GC 10020

### Standard contactors, TeSys GC

Maximum current rating category	No. of poles	Number of 17.5 mm modules	Sold in lots of	Basic reference, to be completed by adding the voltage code (1)	Weight
<b>A</b>					<b>kg</b>
16	1 – 1	12	GC 1610••	0.110	
	2 – 1	12	GC 1620••	0.110	
	3 – 2	6	GC 1630••	0.230	
	4 – 2	6	GC 1640••	0.230	
	1 1 1	12	GC 1611••	0.110	
	2 2 2	6	GC 1622••	0.230	
25	1 – 1	12	GC 2510••	0.110	
	2 – 1	12	GC 2520••	0.110	
	3 – 2	6	GC 2530••	0.230	
	4 – 2	6	GC 2540••	0.230	
	1 1 1	12	GC 2511••	0.110	
	2 2 2	6	GC 2522••	0.230	
	– 2 1	12	GC 2502••	0.110	
	– 4 2	6	GC 2504••	0.230	
40	2 – 2	6	GC 4020••	0.230	
	3 – 3	4	GC 4030••	0.350	
	4 – 3	4	GC 4040••	0.390	
	1 1 2	6	GC 4011••	0.230	
	2 2 3	4	GC 4022••	0.390	
	– 2 2	6	GC 4002••	0.230	
	– 4 3	4	GC 4004••	0.390	
63	2 – 2	6	GC 6320••	0.340	
	3 – 3	4	GC 6330••	0.390	
	4 – 3	4	GC 6340••	0.390	
	1 1 2	6	GC 6311••	0.340	
	2 2 3	4	GC 6322••	0.390	
	– 2 2	6	GC 6302••	0.340	
	– 4 3	4	GC 6304••	0.390	
100	2 – 3	4	GC 10020••	0.680	
	4 – 6	2	GC 10040••	0.780	

(1) Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

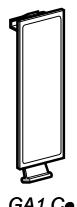
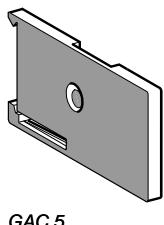
Volts	12	24	48	110	220/240
50 Hz	J5	B5	E5	F5	M5
60 Hz	J6	B6	E6	F6	M6



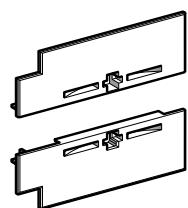
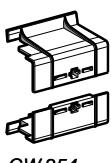
Instantaneous auxiliary contact blocks				Reference	Weight
Number of contacts	No. of poles				
2	1	1	-	GAC 0521	0.016
-	2	-	-	GAC 0531	0.016
-	-	1	-	GAC 0511	0.016



Accessories						
Description	For use on contactor	Number of modules	Operational voltage V	Sold in lots of	Unit reference	Weight kg
Coil suppression blocks comprising 2 RC circuits	-	1	12...48	1	GAP 21	0.090
			110...240	1	GAP 23	0.090



Ventilation 1/2 module	-	1/2	-	10	GAC 5	0.015
Clips onto rail						
Cover plates	-	1/2	-	10	GA1 C7	0.001



Set of sealable terminal covers (10 top parts + 10 bottom parts)	16 or 25 A 3 or 4 contacts	2	-	1	GW 254	0.040
	40 or 63 A 2 contacts	2	-	1	GW 632	0.040
	40 or 63 A 3 or 4 contacts	3	-	1	GW 634	0.050

### Dimensions

#### Contactors

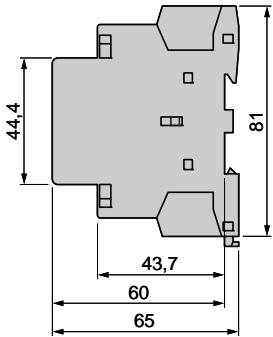
##### Common side view

GC 1610, 1611, 1620  
GC 2502, 2510, 2511, 2520

GC 1622, 1640  
GC 2504, 2522, 2530, 2540

1 module

2 modules



1 module



2 modules

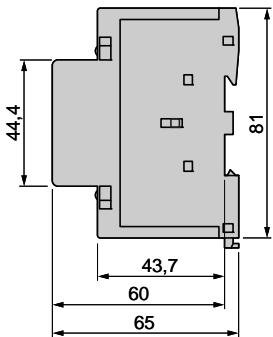
##### Common side view

GC 4002, 4011, 4020  
GC 6302, 6311, 6320

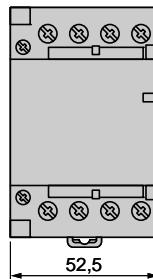
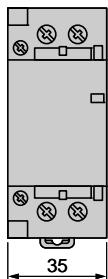
GC 4004, 4022, 4030, 4040  
GC 6304, 6322, 6330, 6340

2 modules

3 modules



2 modules

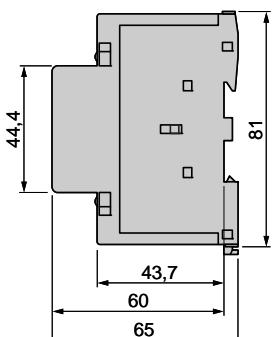


3 modules

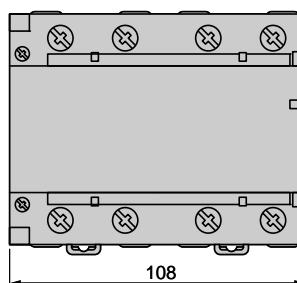
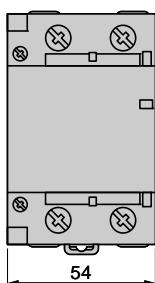
##### Common side view

GC 10020  
3 modules

GC 10040  
6 modules



3 modules

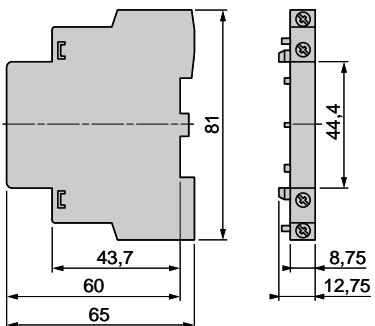


6 modules

### Dimensions

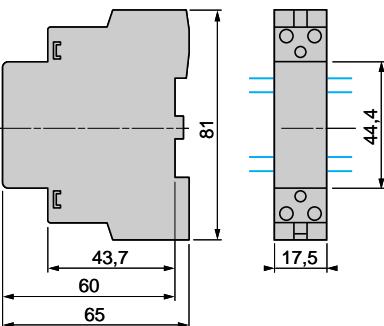
#### Auxiliary contacts

GAC 0511, 0531 and 0521



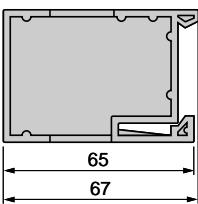
#### Coil suppression blocks

GAP 21, 22 and 23



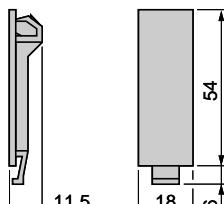
#### Clip-on ventilation 1/2 module

GAC 5

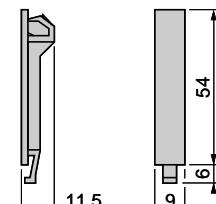


#### Cover plates

GA1 C6



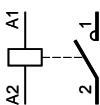
GA1 C7



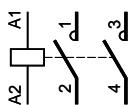
### Schemes

#### Contactors

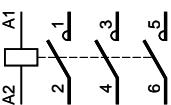
GC ●●10



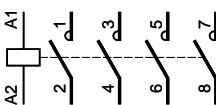
GC ●●20



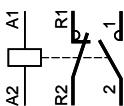
GC ●●30



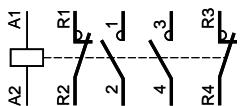
GC ●●40



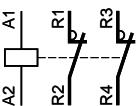
GC ●●11



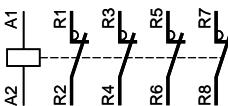
GC ●●22



GC ●●02

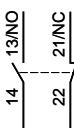


GC ●●04

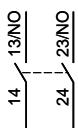


#### Auxiliary contacts

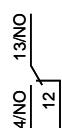
GAC 0521



GAC 0531



GAC 0511



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