

Selection Guide - RGC..P (Integrated Overtemperature Protection)

Rated voltage, Blocking voltage, Switching mode	Control voltage	Connection Control/ Power	Rated operational current @ 40°C (I ² t value)			
			Product width			
			23 AAC (525A ² s) 22.5mm	25 AAC (1800A ² s) 22.5mm, low depth	30 AAC (1800A ² s) 22.5mm	85AAC (6600A ² s) 70mm + fan
230V, 800Vp ZC	5-32VDC	Screw/Screw	RGC1A23D20GKEP	-	RGC1A23D30GKEP	RGC1A23D90GGEP
			23 AAC (525A ² s) 22.5mm	25 AAC (1800A ² s) 22.5mm, low depth	30 AAC (1800A ² s) 22.5mm	
600V, 1200Vp ZC	5-32VDC 20-275VAC, 24-190VDC	Box/Screw	RGC1A60D20GKEP	RGC1A60D25GKEP	RGC1A60D30GKEP	
		Box/Screw	RGC1A60A20GKEP	RGC1A60A25GKEP	RGC1A60A30GKEP	
			40 AAC (3200A ² s) 35mm	43 AAC (18000A ² s) 35mm	60 AAC (3200A ² s) 70mm	65AAC (18000A ² s) 70mm
			RGC1A60D40GGEP	RGC1A60D42GGEP	RGC1A60D60GGEP	RGC1A60D62GGEP
			RGC1A60A40GGEP	RGC1A60A42GGEP	RGC1A60A60GGEP	RGC1A60A62GGEP
			85AAC (6600A ² s) 70mm + fan		85AAC (18000A ² s) 70mm + fan	
			RGC1A60D90GGEP		RGC1A60D92GGEP	
			RGC1A60A90GGEP		RGC1A60A92GGEP	

Output Voltage Specifications

	RGC..23..	RGC..60..
Operational Voltage Range	24-240 VAC, +10%, -15% on max	42-600 VAC, +10% -15% on max
Blocking Voltage	800Vp	1200 Vp
Internal Varistor	275V	625V

General Specifications

Latching voltage (across L1-T1)	≤20V	Over-voltage category	III (fixed installations)
Operational frequency range	45 to 65Hz	Isolation	
Power factor	> 0.5 @ Vrated	Input to Output RGC...	4000 Vrms
Touch Protection	IP20	RGC...D..P	2500 Vrms
Control input status	continuously ON Green LED, when control input is applied	RGC...A..P	4000 Vrms
Pollution degree	2 (non-conductive pollution with possibilities of condensation)	Input and Output RGC... to case RGC...D..P RGC...A..P	4000 Vrms 4000 Vrms 4000 Vrms
		Input to Fan/ Alarm Output RGC...A..P	2500 Vrms

Output Specifications (@ 25°C unless otherwise specified)

	RGC..15..	RGC..20..	RGC..25..	RGC..30..
Rated operational current ⁶ AC-51 rating @ Ta=25°C	20 AAC	25.5 AAC	30 AAC	30 AAC
AC-51 rating @ Ta=40°C	20 AAC	23 AAC	25 AAC	30 AAC
AC-53a rating @ Ta=40°C	5 AAC	5 AAC	5 AAC	8 AAC
Number of motor starts (x:6, Tx:6s, F:50%) at 40°C ⁵	30	30	30	30
Min. operational current	150 mAAC	150 mAAC	250 mAAC	250 mAAC
Rep. overload current - (Motor Rating) PF = 0.4 - 0.5 UL508: T _{AMB} =40°C, t _{ON} =1s, t _{OFF} =9s, 50cycles	51 AAC	60 AAC	51 AAC	84 AAC
Maximum transient surge current (I _{TSM}), t=10ms	325 Ap	325 Ap	600 Ap	600Ap
Maximum off-state leakage current at rated voltage	3 mAAC	3 mAAC	3 mAAC	3 mAAC
I ² t for fusing (t=10ms) Minimum	525 A ² s	525 A ² s	1800 A ² s	1800 A ² s
Critical dv/dt (@ T _j init = 40°C)	1000 V/us	1000 V/us	1000 V/us	1000 V/us

	RGC..40..	RGC..42..	RGC..60..	RGC..62..	RGC..90..	RGC..92..
Rated operational current ⁶ AC-51 rating @ Ta=25°C	47 AAC	50 AAC	70 AAC	75 AAC	85 AAC	85 AAC
AC-51 rating @ Ta=40°C	40 AAC	43 AAC	60 AAC	65 AAC	85 AAC	85 AAC
AC-53a rating @ Ta=40°C	13 AAC	16 AAC	14.8 AAC	20 AAC	18 AAC	20 AAC
Number of motor starts (x:6, Tx:6s, F:50%) at 40°C ⁵	30	30	30	30	30	30
Min. operational current	400 mAAC	500 mAAC	400 mAAC	500 mAAC	400 mAAC	500 mAAC
Rep. overload current - (Motor Rating) PF = 0.4 - 0.5 UL508: T _{AMB} =40°C, t _{ON} =1s, t _{OFF} =9s, 50cycles	126 AAC	126 AAC	144 AAC	168 AAC	168 ACC	168 AAC
Maximum transient surge current (I _{TSM}), t=10ms	800 Ap	1900 Ap	800 Ap	1900 Ap	1150 Ap	1900 Ap
Maximum off-state leakage current at rated voltage	3 mAAC	3 mAAC	3 mAAC	3 mAAC	3 mAAC	3 mAAC
I ² t for fusing (t=10ms) Minimum	3200 A ² s	18000 A ² s	3200 A ² s	18000 A ² s	6600 A ² s	18000 A ² s
Critical dv/dt (@ T _j init = 40°C)	1000 V/us	1000 V/us	1000 V/us	1000 V/us	1000 V/us	1000 V/us

5. Overload current profile definition: x: multiple of AC53a rating, Tx: duration of current surge, F: duty cycle

6. See derating curves

Overtemperature Alarm Specifications for RGC...P

	RGC..D..P	RGC..A..P
Output type	PNP open collector	Potential Free
Normal state	Closed	Closed
Maximum current rating	50 mADC	50 mADC
Rated voltage (EN61131-2: 2003) ^{8,7} , U _a	24VDC -15%, +20%	24VDC -15%, +20%
Rated voltage, U _s	RGC...D9xGGEP 24VDC ± 10%	N/A
Fan rating, U _f	RGC...A9xGGEP N/A	24VDC ±10%, 50mA nominal
Alarm voltage drop	Typical Maximum	1.8VDC 3.5VDC
Visual Indication	Continuous Red LED	Continuous Red LED
Reverse polarity protection	24VDC	24VDC

7: DC supply for alarm signal should be supplied from a Class 2 power source

8: Maximum voltage to be applied between 11+ and 12- (U_a) terminals should be 35VDC maximum with reference to A2-

Input specifications

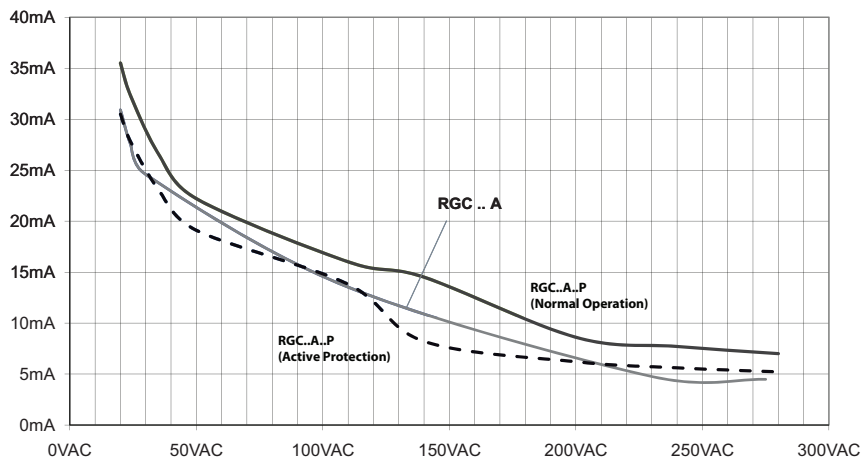
		RGC..D..	RGC..A..
Control voltage range ^{9,10}	RGC..23..	3 - 32 VDC	20 - 275 VAC, 24 (-10%) - 190 VDC
	RGC..60..	4 - 32 VDC	20-275 VAC, 24 (-10%) - 190 VDC
	RGC...P (Uc)	5 - 32 VDC	20-275 VAC, 24 (-10%) - 190 VDC
Pick-up voltage	RGC..23..	3.0 VDC	20 VAC/DC
	RGC..60..	3.8 VDC	
	RGC...P	5 VDC	20 VAC/ 24VDC
Drop-out voltage		1 VDC	5 VAC/DC
Maximum Reverse voltage		32 VDC	-
Response time pick-up ZC (RGC1A..)		0.5 cycle + 500µs @ 24VDC	2 cycles @ 230VAC/110VDC
Response time pick-up IO (RGC1B..)		350µs @ 24 VDC	N/A
Response time drop-out		0.5 cycle + 500µs @ 24VDC	0.5 cycle + 40ms @ 230VAC/ 110VDC
Input current @ 40°C		See diagrams below	See diagrams below

9. DC control to be supplied by class 2 power source according to UL1310

10. For GL approved models control range for RGC1.23... is 4-32VDC and for RGC1.60... 5-32VDC

RG..A..

RGC1 .. A : input current vs input voltage



RGC1 .. A : input current vs input voltage

