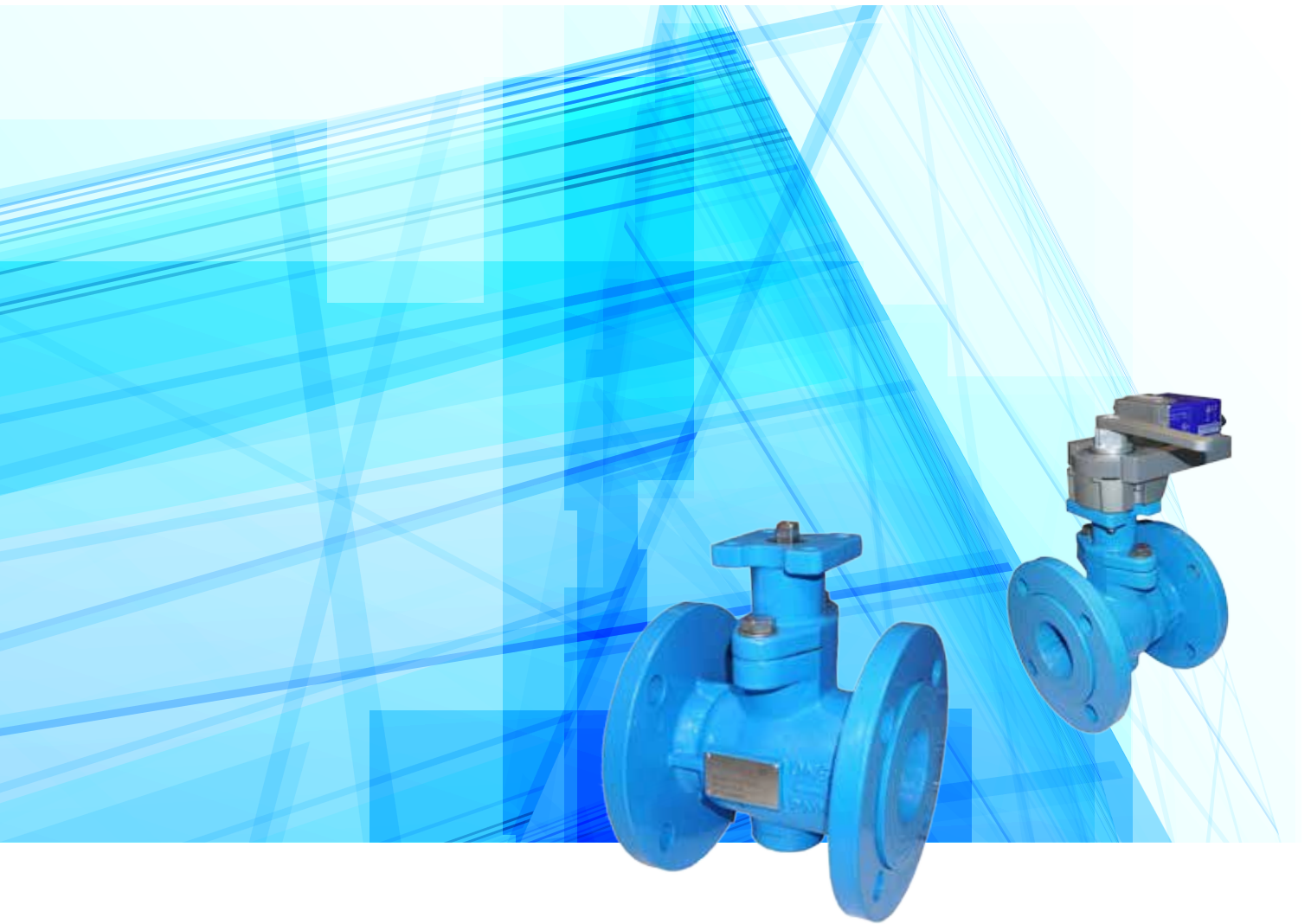


Two-Way Integrated Flanged Control Ball Valves



The power behind **your mission**

Johnson Controls 

Two-Way Integrated Flanged Control Ball Valves



VG12F5xx-C Series

DN65...150, PN16

The VG12F5 series ball valves are designed for water control in HVAC systems.

The valve can be used together with Johnson Controls rotary actuator to accurately regulate the flow in response to the requirements of the controller.

These ball valves can be directly mounted with Johnson Controls VA9300 series actuators for fast field installation and easy valve insulation.

FEATURES

- Integral flow characterizing disc achieves high control performance
- Fixed ball design ensures consistent torque
- Double o-rings reinforce stem sealing
- Low leakage rate prevents energy loss
- Integrated flanged valve body makes installation efficient
- Dirty resistance allows long life
- characteristic

ORDERING INFORMATION

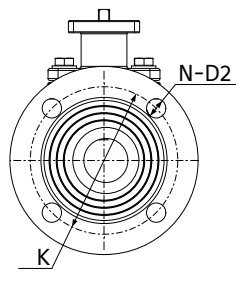
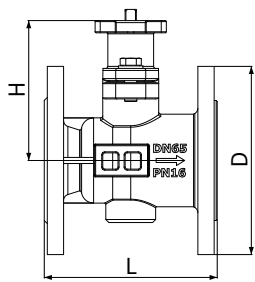
VG	1	X	X	X	XX	-	C
VG	Valve						
	1	Control Ball Valve					
		2	Two - way				
			F	Integrated flanged body (ISO7005-2)			
				5	Stainless steel ball and stem assembly		
					GT	DN65 (2-1/2"), Kvs =75	
					HU	DN80 (3"), Kvs =120	
					JV	DN100 (4"), Kvs =160	
					KW	DN125 (5"), Kvs =270	
					LX	DN150 (6"), Kvs =390	
					-	C	Place of origin: C = Made in China



SELECTION TABLE

Two-way Ball Valve			delta P max. (kPa)		
Product Number	Size	Flow rate max.(m ³ /h)			
VG12F5GT-C	DN65	75	800		500
VG12F5HU-C	DN80	120	800		500
VG12F5JV-C	DN100	160	800		500
VG12F5KW-C	DN125	270		800	
VG12F5LX-C	DN150	390		500	
Actuator Type			Non-spring return		Spring return
Actuator Series			VA9320 Series	VA9335 Series	M9220 Series
Actuator Torque			20 Nm	35 Nm	20 Nm
Linkage to Actuator			-		M9000-52F-C

DIMENSIONS



DN	L(mm)	D(mm)	K(mm)	N-D2(mm)	H(mm)	Weight(Kg)
DN65	170	185	145	4-19	137.5	11
DN80	180	200	160	8-19	145	14
DN100	190	220	180	8-19	155	17
DN125	200	250	210	8-19	175	23
DN150	210	285	240	8-23	192.5	31

TECHNICAL SPECIFICATIONS

- Pressure Rating: PN16
- Fluid Type: Regulation of hot / chilled water with glycol up to max. 50% vol. in HVAC system
- Fluid Temperature: -10 °C to 120 °C
- Flow Characteristic: Equal percentage
- Leakage: ≤0.01% Kvs (ANSI Class IV IEC 60534-4)
- Pipe Connection: Flanged ISO7005-2
- Storage Temperature: -10 to 65 °C, No condensation
- Materials:
 - Valve body: Ductile Iron
 - Stem: Stainless steel
 - Ball: Stainless steel
 - Seat: Enhanced PTFE

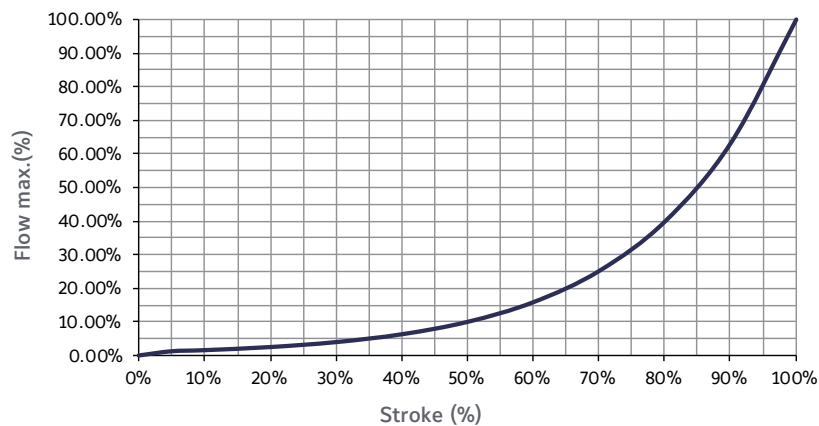


Fig1: Flow Characteristic

NON SPRING RETURN ACTUATORS

Product Number	Power Supply	Control Signal	Feedback	Running time (s)	Auxiliary Switch
VA9320-AUA-3	100- 240 VAC	Floating / On-off	-	90	M9300-2 or M9300-1 ^②
VA9320-HGA-3	24 VAC/VDC	Floating / On-off / 0(2)-10VDC	0(2)-10VDC ^①	90	
VA9335-AUA-3	100- 240 VAC	Floating / On-off	-	150	
VA9335-HGA-3	24 VAC/VDC	Floating / On-off / 0(2)-10VDC	0(2)-10VDC ^①	150	

Note: See “VA9320/9335” Product Bulletin for more information of actuators.

① : Only available when control signal is 0(2)-10VDC.

② : The auxiliary switch has to be ordered separately, M9300-2 = 2 SPDT, M9300-1 = 1 SPDT.

VA93xx-HGA-3 Wiring Diagram

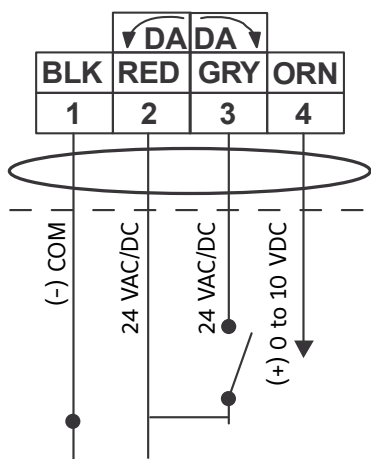


Fig2: On-off 24V Application

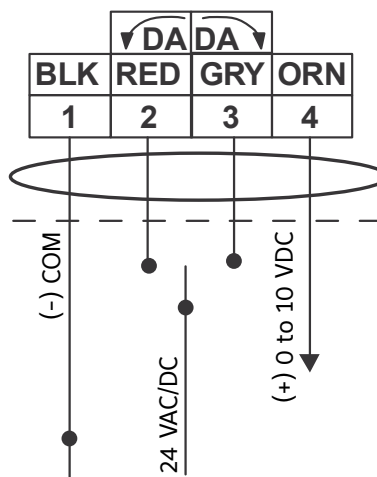


Fig3: Floating 24V Application

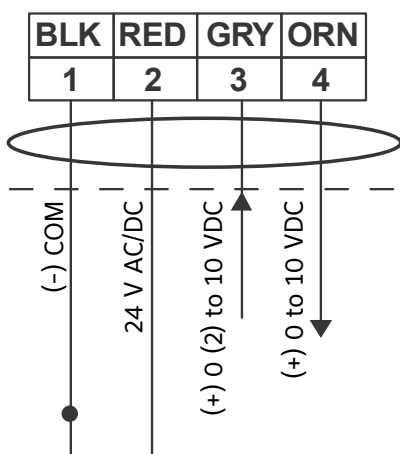


Fig4: Proportional 0(2)-10VDC Application

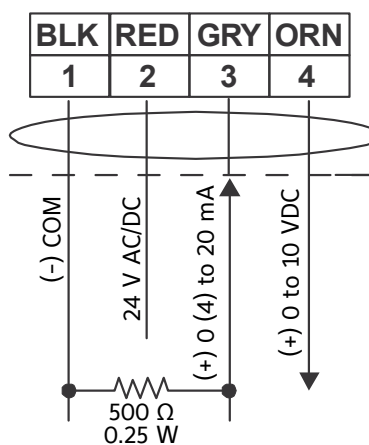


Fig5: Proportional 0(4)-20mA Application
Note: 500Ω resistance has to be ordered separately.



VA93xx-AUA-3 Wiring Diagram

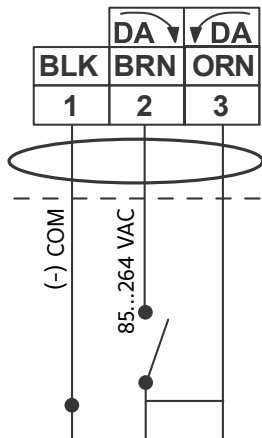


Fig6: On-off AC 85-264V Application

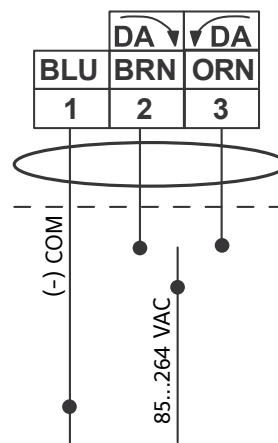


Fig7: Floating AC 85-264V Application

SPRING RETURN ACTUATORS

Product Number	Power Supply	Control Signal	Feedback	Running time (s)	Spring-return time (s)	Auxiliary Switch
M9220-AGA-3	24 VAC/VDC	Floating	-	150	20	-
M9220-AGC-3	24 VAC/VDC	Floating	-	150	20	2 SPDT
M9220-BDA-3	230 VAC	On-off	-	24-57	11-15	-
M9220-BDC-3	230 VAC	On-off	-	24-57	11-15	2 SPDT
M9220-BGA-3	24 VAC/VDC	On-off	-	24-57	11-15	-
M9220-BGC-3	24 VAC/VDC	On-off	-	24-57	11-15	2 SPDT
M9220-HGA-3	24 VAC/VDC	0(2)-10VDC	0-10VDC	150	20	-
M9220-HGC-3	24 VAC/VDC	0(2)-10VDC	0-10VDC	150	20	2 SPDT

Note: See "M9220" Product Bulletin for more information of actuators.

M9220-AGx-3 Wiring Diagram

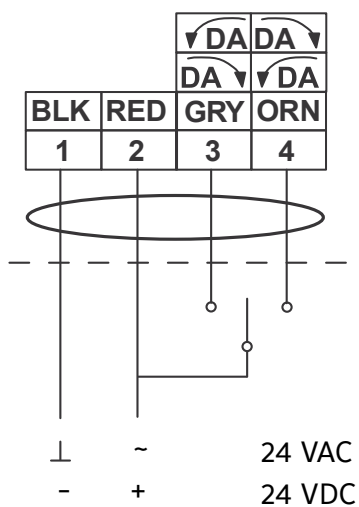


Fig8: Floating Application, 4 wires

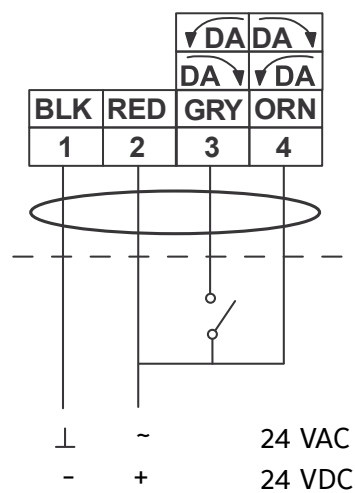


Fig9: On-off Application, single wire

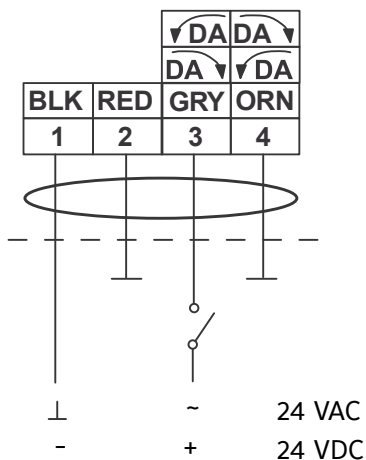


Fig10: On-off Application, 2 wires

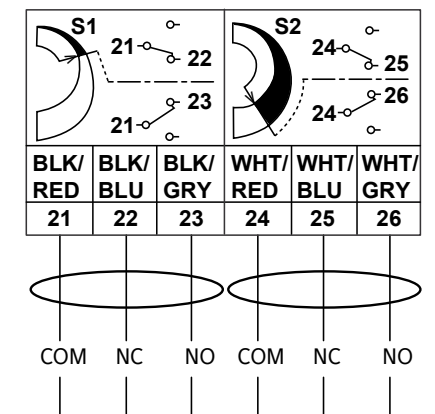


Fig11: Auxiliary Switch (-AGC model)

M9220-Bxx-3 Wiring Diagram

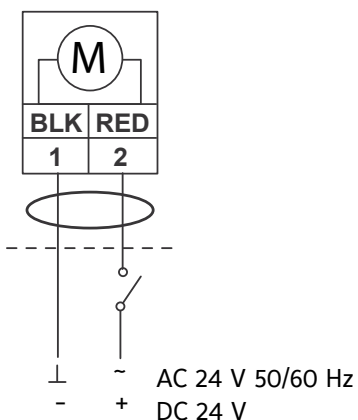


Fig12: On-off 24V Application

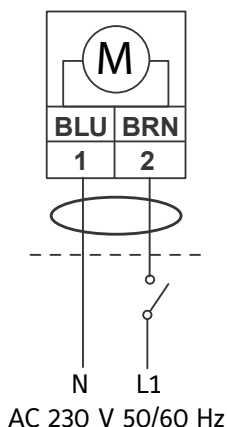


Fig13: On-off 230V Application

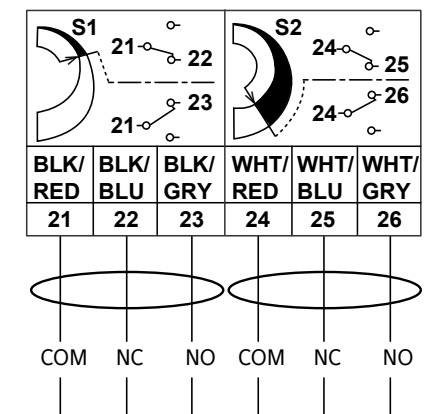


Fig14: Auxiliary Switch (-BxC model)

M9220-HGx-3 Wiring Diagram

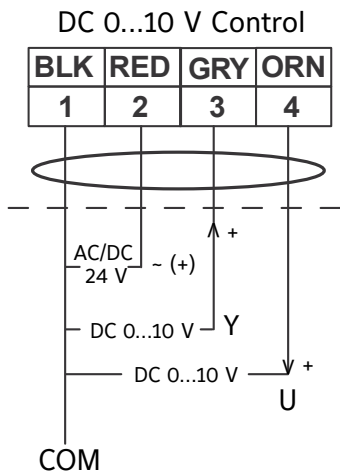


Fig15: Proportional 0(2)-10VDC Application

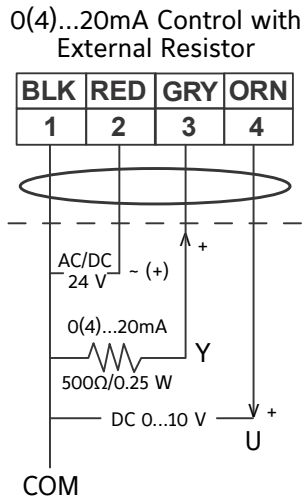


Fig16: Proportional 0(4)-20mA Application

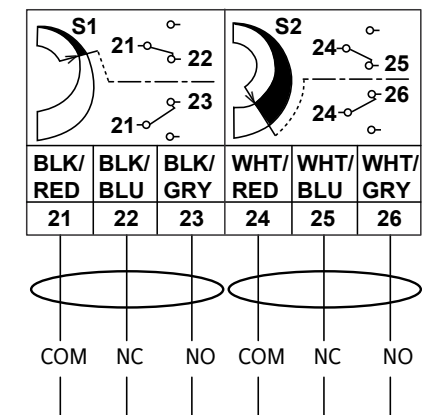
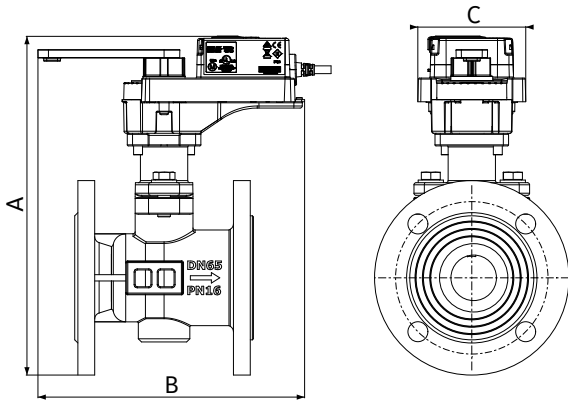


Fig17: Auxiliary Switch (-HGx model)

Note: 500Ω resistance has to be ordered separately.

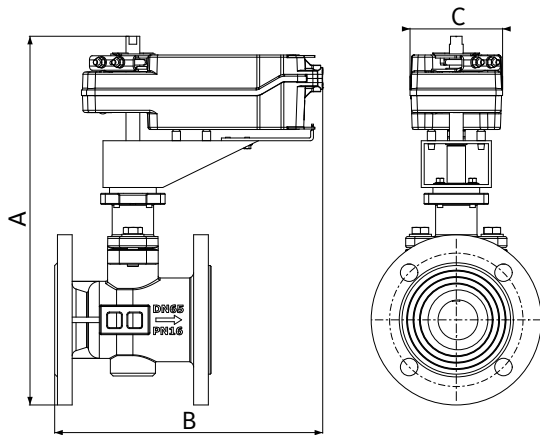


ASSEMBLY DIMENSIONS (Valve with VA9320/9335 actuator)



Size	A(mm)	B(mm)	C(mm)
DN65	322.3	250	103
DN80	337.3	250	103
DN100	357.3	250	103
DN125	392.3	250	103
DN150	427.3	250	103

ASSEMBLY DIMENSIONS (Valve with M9220 actuator)



Size	A(mm)	B(mm)	C(mm)
DN65	400	291	100
DN80	415	296	100
DN100	435	301	100



Johnson Controls:

At Johnson Controls, we transform the environments where people live, work, learn and play. From optimizing building performance to improving safety and enhancing comfort, we drive the outcomes that matter most. We deliver our promise in industries such as healthcare, education, data centers and manufacturing. With a global team of 105,000 experts in more than 150 countries and over 130 years of innovation, we are the power behind our customers' mission. Our leading portfolio of building technology and solutions includes some of the most trusted names in the industry, such as Tyco®, York®, Metasys®, Ruskin®, Titus®, Frick®, Penn®, Sabroe®, Simplex®, Ansul® and Grinnell®.

For more information, visit www.johnsoncontrols.com or follow us [@johnsoncontrols](https://twitter.com/johnsoncontrols) on Twitter.

AUSTRALIA

5 Lindwall Place,
Rouse Hill,
NSW 2155, Australia

HONG KONG

11/F & 12/F,
Millennium City 6,
392 Kwun Tong Road,
Kwun Tong,
Kowloon, Hong Kong

INDONESIA

Wisma 77, 16th Floor,
Jl. S. Parman Kav. 77,
Slipi,
Jakarta 11410,
Indonesia

MALAYSIA

Luxor Tech Centre,
Level 2,
No. 1A, Jalan
Teknologi, Taman
Sains Selangor 1, Kota
Damansara, PJU 5,
47810 Petaling Jaya,
Selangor Darul Ehsan,
Malaysia

SINGAPORE

31 International
Business Park Road,
#03-03, Lobby D & E,
Singapore 609921

KOREA

34, Mareunnae-ro,
Jung-gu,
Seoul, 04555, Korea

THAILAND

Rama 9 Road, 719 KPN
Tower,
8th Floor, Bangkapi,
Huaykwang,
Bangkok, 10310
Thailand

The power behind **your mission**

