Mibbo

Signal Isolator

Ultra-thin design, high-density installation
Provides highly reliable signal isolation

2024.06

Superb & Reliable Product Family

Total Solution for Control Components
Providing Customizing Solution

>>> About Mibbo

Mibbo specializes in R&D, production, sale and technical solutions of high quality industrial control products. Positioning in the high-end equipment manufacturers and system integrators, Provide high quality products and customizing solutions for customers and realize the common growth of enterprise value and customer's value base on "Manufacturing Products for QA Customers".

There are 2 R&D centers, 5 companies under Mibbo Brand. Mibbo business has already covered more than 30 countries and regions.

Switch power supply is one of the major products in Mibbo. To provide our customers more efficient, reliable and qualified solutions in many industrial fields, such as automatic control, intelligent control system, setting and equipment of Electronic instrument, LED control, logistics and household appliances etc.

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Signal Isolator & Converter

Signal Isolator

Product introduction

Mibbo signal isolators have ultra-thin design and high density installation to provide highly reliable signal isolation; Provide a wide selection of input/output signal combinations (signals, thermocouples, thermal resistors); The input, output and power supply are isolated. Electromagnetic compatibility in accordance with 89/336/EEC/IEC/EN61000; Ultra-thin design for high-density installation.

Application scenario

Widely used in new energy, power meters, data centers, robots, numerical control systems, intelligent automated production, animal husbandry and other industrial and civil fields; Stable and outstanding products ensure the stable and efficient operation of the system and promote the development of industrial automation.

For a list of models applicable to the specification certification, please see the Mibbo website.
www.mibbo.cn

Scan the code to learn more Mibbo Product information (Wechat public account)

Scan code attention Mibbo Industrial online (Tik Tok video number)

For more product information, please go to the official website to download the electronic information. Thank you for your contribution to energy conservation and environmental protection.

QT2C Series Signal isolator

Product characteristics

- Provides a wide selection of input/output signal combinations
- The input, output and power supply are isolated
- Plug and plug terminals for live plug and plug operation
- Multiple channels: one in one out, one in two out, two in two out

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	Input channel *1	Input channel *2							Explain
		4~20mA	0~20mA	0~10mA	1~5V	0~5V	0~10V	0~20mV	
Model No. (one in one out)	4~20mA	QT2C-A0A0	QT2C-A0B0	QT2C-A0C0	QT2C-A010	QT2C-A020	QT2C-A030	QT2C-A040	Product input signal and output signal can be set as required, please consult the business department for details. Set up products on demand Be sure to provide configuration parameters when ordering.
	0~20mA	QT2C-B0A0	QT2C-B0B0	QT2C-B0C0	QT2C-B010	QT2C-B020	QT2C-B030	QT2C-B040	
	0~10mA	QT2C-C0A0	QT2C-C0B0	QT2C-C0C0	QT2C-C010	QT2C-C020	QT2C-C030	QT2C-C040	
	1~5V	QT2C-10A0	QT2C-10B0	QT2C-10C0	QT2C-1010	QT2C-1020	QT2C-1030	QT2C-1040	
	0~5V	QT2C-20A0	QT2C-20B0	QT2C-20C0	QT2C-2010	QT2C-2020	QT2C-2030	QT2C-2040	
	0~10V	QT2C-30A0	QT2C-30B0	QT2C-30C0	QT2C-3010	QT2C-3020	QT2C-3030	QT2C-3040	
	0~20mV	QT2C-40A0	QT2C-40B0	QT2C-40C0	QT2C-4010	QT2C-4020	QT2C-4030	QT2C-4040	

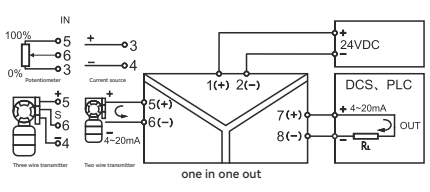
	Input channel *1	Input channel *2							Explain
		4~20mA	0~20mA	0~10mA	1~5V	0~5V	0~10V	0~20mV	
Model No. (one in two out)	4~20mA	QT2C-A0AA	QT2C-A0BB	QT2C-A0CC	QT2C-A011	QT2C-A022	QT2C-A033	QT2C-A044	Product input signal and output signal can be set as required, please consult the business department for details. Set up products on demand Be sure to provide configuration parameters when ordering.
	0~20mA	QT2C-B0AA	QT2C-B0BB	QT2C-B0CC	QT2C-B011	QT2C-B022	QT2C-B033	QT2C-B044	
	0~10mA	QT2C-C0AA	QT2C-C0BB	QT2C-C0CC	QT2C-C011	QT2C-C022	QT2C-C033	QT2C-C044	
	1~5V	QT2C-10AA	QT2C-10BB	QT2C-10CC	QT2C-1011	QT2C-1022	QT2C-1033	QT2C-1044	
	0~5V	QT2C-20AA	QT2C-20BB	QT2C-20CC	QT2C-2011	QT2C-2022	QT2C-2033	QT2C-2044	
	0~10V	QT2C-30AA	QT2C-30BB	QT2C-30CC	QT2C-3011	QT2C-3022	QT2C-3033	QT2C-3044	
	0~20mV	QT2C-40AA	QT2C-40BB	QT2C-40CC	QT2C-4011	QT2C-4022	QT2C-4033	QT2C-4044	

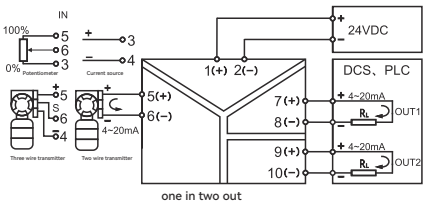
	Input channel *2	Input channel *2							Explain
		4~20mA	0~20mA	0~10mA	1~5V	0~5V	0~10V	0~20mV	
Model No. (two in two out)	4~20mA	QT2C-AAAA	QT2C-AABB	QT2C-AACC	QT2C-AA11	QT2C-AA22	QT2C-AA33	QT2C-AA44	Product input signal and output signal can be set as required, please consult the business department for details. Set up products on demand Be sure to provide configuration parameters when ordering.
	0~20mA	QT2C-BBAA	QT2C-BBBB	QT2C-BBCC	QT2C-BB11	QT2C-BB22	QT2C-BB33	QT2C-BB44	
	0~10mA	QT2C-CCAA	QT2C-CCBB	QT2C-CCCC	QT2C-CC11	QT2C-CC22	QT2C-CC33	QT2C-CC44	
	1~5V	QT2C-11AA	QT2C-11BB	QT2C-11CC	QT2C-1111	QT2C-1122	QT2C-1133	QT2C-1144	
	0~5V	QT2C-22AA	QT2C-22BB	QT2C-22CC	QT2C-2211	QT2C-2222	QT2C-2233	QT2C-2244	
	0~10V	QT2C-33AA	QT2C-33BB	QT2C-33CC	QT2C-3311	QT2C-3322	QT2C-3333	QT2C-3344	
	0~20mV	QT2C-44AA	QT2C-44BB	QT2C-44CC	QT2C-4411	QT2C-4422	QT2C-4433	QT2C-4444	

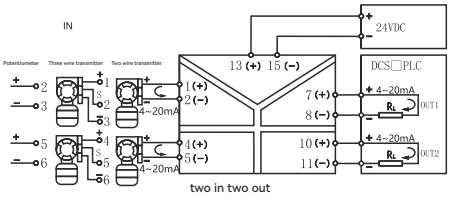
Technical data		
Input	Input signal	Two-wire transmitter signal, three-wire transmitter signal or current source, voltage source signal: 4~20mA, 0~20mA, 0~10mA, 1~5V, 0~5V, 0~10V, 0~20mV (depending on the model)
	Supply voltage when supplying power to transmitter	18~28VDC，≤30mADC
Exportation	Output signal	4~20mA, 0~20mA, 0~10mA, 1~5V, 0~5V, 0~10V, 0~20mV (by model)
	Precision	0.1% F.S.
	Temperature coefficient	≤100ppm/K (Typical value: 50ppm/K)
	Response time	≤50mS
Power source	Supply voltage	24VDC±10% (maximum allowable range: 20~30VDC)
	Power consumption	≤1.5W (Power supply 24VDC)
	Power supply protection	Reverse protection
General characteristic	Operating temperature	-25~+60℃
	Storage temperature	-40~+85℃
	Overall dimension	110mm*120mm*13mm (L * H * W)
	Weight	~100g
Insulation parameter	Standard	EN 61010-1
	EMC Standard	IEC 61000-6-2； IEC 61000-6-4
	Isolation voltage	2kv AC@1min
	Creepage distance and electrical clearance	≥3.0mm

QT2C	-	A	0	A	0
Series		1 Input channel	2 Input channel	1 Input channel	2 Input channel

Wiring diagram







QT2R Series Thermal resistance transmission isolator

Product characteristics

- Provides a wide selection of input/output signal combinations
- The input, output and power supply are isolated
- Plug and plug terminals for live plug and plug operation
- Multiple channels: one in one out, one in two out

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Model No. (one in one out)	Input channel *1		Input channel *1				Explain
	Input channel code	Thermal resistance type Temperature range①	4~20mA (Code A)	0~20mA (Code B)	1~5V (Code 1)	0~5V (Code 2)	
	1	Pt100:-200~800℃	QT2R-10A0/□	QT2R-10B0/□	QT2R-1010/□	QT2R-1020/□	Product input signal and output signal can be set as required, please consult the business department for details. Set up products on demand Be sure to provide configuration parameters when ordering.
	2	Pt1000:-200~800℃	QT2R-20A0/□	QT2R-20B0/□	QT2R-2010/□	QT2R-2020/□	
	3	Cu50:-50~150℃	QT2R-30A0/□	QT2R-30B0/□	QT2R-3010/□	QT2R-3020/□	
	4	Cu100:-50~150℃	QT2R-40A0/□	QT2R-40B0/□	QT2R-4010/□	QT2R-4020/□	

①/ Note: the input type and index number and the range range should be indicated when ordering (see Attachment 1). If not indicated, the product will be provided according to the factory default Settings when shipped. (Factory default model: QT2R-10AA /A1, that is: input signal Pt100:0 ~200℃ 3-wire/output 4~20mA)

Model No. (one in two out)	Input channel *1		Input channel *2				Explain
	Input channel code	Thermal resistance type Temperature range①	4~20mA (Code A)	0~20mA (Code B)	1~5V (Code 1)	0~5V (Code 2)	
	1	Pt100:-200~800℃	QT2R-10AA/□	QT2R-10BB/□	QT2R-1011/□	QT2R-1022/□	Product input signal and output signal can be set as required, please consult the business department for details. Set up products on demand Be sure to provide configuration parameters when ordering.
	2	Pt1000:-200~800℃	QT2R-20AA/□	QT2R-20BB/□	QT2R-2011/□	QT2R-2022/□	
	3	Cu50:-50~150℃	QT2R-30AA/□	QT2R-30BB/□	QT2R-3011/□	QT2R-3022/□	
	4	Cu100:-50~150℃	QT2R-40AA/□	QT2R-40BB/□	QT2R-4011/□	QT2R-4022/□	

①/ Note: the input type and index number and the range range should be indicated when ordering (see Attachment 1). If not indicated, the product will be provided according to the factory default Settings when shipped. (Factory default model: QT2R-10AA /A1, that is: input signal Pt100:0 ~200℃ 3-wire/output 4~20mA)

Attachment 1: Thermal resistance conversion accuracy and range

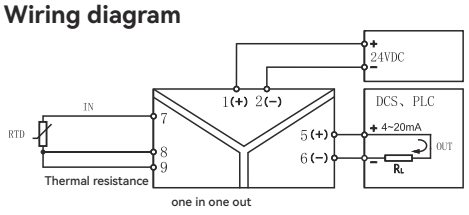
Thermal resistance index number	Configurable range②	Configurable minimum range	Conversion accuracy③	
			Absolute error	Basic error
Pt100	-200~800℃	50℃	±0.2℃	±0.1%
Pt1000	-200~800℃	200℃	±0.4℃	±0.1%
Cu50	-50~150℃	50℃	±0.4℃	±0.1%
Cu100	-50~150℃	50℃	±0.4℃	±0.1%

NO②:Other thermal resistance index numbers not listed in the table can be specified for ordering.
NO③:Basic error and absolute error, the maximum value when applied.

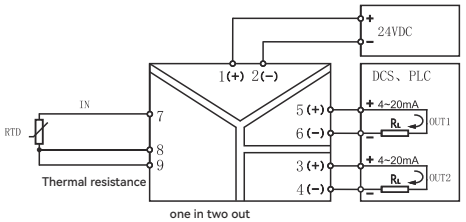
Technical data		
Input	Input signal (factory setting according to customer requirements)	Pt100, Pt1000, Cu50, Cu100 2 wire or 3 wire See Appendix 1 for parameters
Exportation	Output signal	4~20mA, 0~20mA, 1~5V, 0~5V(For other signals, please consult the business department)
	Maximum output current	≤24mA(abnormal operation)
	Maximum output voltage	≤18V(output open circuit)
	Alarm indication	Red LED
	Alarm output current (current output only)	The input short-circuit alarm output is about 3mA, and the input open-circuit alarm output is about 22mA
	Load (current/voltage)	≤300 Ω / ≥2K Ω
	Conversion accuracy	See attachment 1
	Temperature coefficient	≤100ppm/K
	Response time	<1s
Power source	Supply voltage	24VDC±10% (maximum allowable range: 20~30VDC)
	Power consumption	<40mA (24VDC power supply)
	Power supply protection	Reverse protection
General characteristic	Operating temperature	-25~+60℃
	Storage temperature	-40~+85℃
	Overall dimension	110mm*120mm*13mm (L * H * W)
	Weight	~100g
Insulation parameter	Standard	EN 61010-1
	EMC Standard	IEC 61000-6-2; IEC 61000-6-4
	Isolation voltage	2kV AC@1min
	Creepage distance and electrical clearance	≥3.0mm

QT2R	-	1	0	A	0	/	A1
Series		1 Input channel	Reserved code	1 Input channel	2 Input channel		Field range number

Wiring diagram



one in one out



one in two out

one in two out

QT2T Series Thermocouple transfer isolator

Product characteristics

- Provides a wide selection of input/output signal combinations
- The input, output and power supply are isolated
- Plug and plug terminals for live plug and plug operation
- Multiple channels: one in one out, one in two out

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Model No. (one in one out)	Input channel *1		Input channel *1				Explain
	Thermocouple type	Temperature range ① (℃)	4~20mA (Code A)	0~20mA (Code B)	1~5V (Code 1)	0~5V (Code 2)	
	Thermoelectric couple K	-200~1372℃	QT2T-K0A0/□	QT2T-K0B0/□	QT2T-K010/□	QT2T-K020/□	Product input signal and output signal can be set as required, please consult the business department for details. Set up products on demand Be sure to provide configuration parameters when ordering.
	E	-200~1000℃	QT2T-E0A0/□	QT2T-E0B0/□	QT2T-E010/□	QT2T-E020/□	
	T	-200~400℃	QT2T-T0A0/□	QT2T-T0B0/□	QT2T-T010/□	QT2T-T020/□	
	J	-200~1372℃	QT2T-J0A0/□	QT2T-J0B0/□	QT2T-J010/□	QT2T-J020/□	
	N	-200~1300℃	QT2T-N0A0/□	QT2T-N0B0/□	QT2T-N010 /□	QT2T-N020/□	
	R	-50~1768℃	QT2T-R0A0/□	QT2T-R0B0/□	QT2T-R010/□	QT2T-R020/□	
	S	-50~1768℃	QT2T-S0A0/□	QT2T-S0B0/□	QT2T-S010/□	QT2T-S020/□	
	B	320~1820℃	QT2T-B0A0/□	QT2T-B0B0/□	QT2T-B010/□	QT2T-B020/□	
	Voltage type	-80~80mV	QT2T-V0A0/□	QT2T-V0B0/□	QT2T-V010/□	QT2T-V020/□	

①/ Note: the input type and index number and the range range should be indicated when ordering (see Attachment 1). If not indicated, the product will be provided according to the factory default Settings when shipped. (Factory default model: QT2T-K0A0 /01, that is: input signal K0: ~1000℃/output 4~20mA)

Model No. (one in one out)	Input channel *1		Input channel *2				Explain
	Thermocouple type	Temperature range ① (℃)	4~20mA (Code A)	0~20mA (Code B)	1~5V (Code 1)	0~5V (Code 2)	
	Thermoelectric couple K	-200~1372℃	QT2T-K0AA/□	QT2T-K0BB/□	QT2T-K011/□	QT2T-K022/□	Product input signal and output signal can be set as required, please consult the business department for details. Set up products on demand Be sure to provide configuration parameters when ordering.
	E	-200~1000℃	QT2T-E0AA/□	QT2T-E0BB/□	QT2T-E011/□	QT2T-E022/□	
	T	-200~400℃	QT2T-T0AA/□	QT2T-T0BB/□	QT2T-T011/□	QT2T-T022/□	
	J	-200~1372℃	QT2T-J0AA/□	QT2T-J0BB/□	QT2T-J011/□	QT2T-J022/□	
	N	-200~1300℃	QT2T-N0AA/□	QT2T-N0BB/□	QT2T-N011/□	QT2T-N022/□	
	R	-50~1768℃	QT2T-R0AA/□	QT2T-R0BB/□	QT2T-R011/□	QT2T-R022/□	
	S	-50~1768℃	QT2T-S0AA/□	QT2T-S0BB/□	QT2T-S011/□	QT2T-S022/□	
	B	320~1820℃	QT2T-B0AA/□	QT2T-B0BB/□	QT2T-B011/□	QT2T-B022/□	
	Voltage type	-80~80mV	QT2T-V0AA/□	QT2T-V0BB/□	QT2T-V011/□	QT2T-V022/□	

①/ Note: the input type and index number and the range range should be indicated when ordering (see Attachment 1). If not indicated, the product will be provided according to the factory default Settings when shipped. (Factory default model: QT2T-K0AA /01, that is: input signal K:0 ~1000℃ /output 4~20mA)

Attachment 1: Conversion accuracy and range of thermocouple (excluding cold end compensation error)

Thermocouple index number		Configurable range②	Configurable minimum range	Conversion accuracy③	
				Absolute error	Basic error
Thermoelectric couple	K	-200~1372℃	50℃	±1℃	±0.1%
	E	-200~1000℃	50℃	±1℃	±0.1%
	T	-200~400℃	50℃	±1℃	±0.1%
	J	-200~1372℃	50℃	±1℃	±0.1%
	N	-200~1300℃	50℃	±1℃	±0.1%
	R	-50~1768℃	500℃	±3℃	±0.1%
	S	-50~1768℃	500℃	±3℃	±0.1%
	B	320~1820℃	500℃	±3℃	±0.1%
Millivolt signal		-80~80mV	5mV	±40μV	±0.1%

NO②:Other thermocouple index numbers not listed in the table can be specified for ordering.
NO③:Basic error and absolute error, the application of the larger value. The measurement error of the thermocouple input shall be compensated by the cold end ±1℃

QT2T Series Thermocouple transfer isolator

Product characteristics

- Provides a wide selection of input/output signal combinations
- The input, output and power supply are isolated
- Plug and plug terminals for live plug and plug operation
- Multiple channels: one in one out, one in two out

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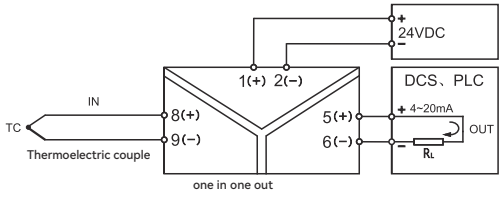
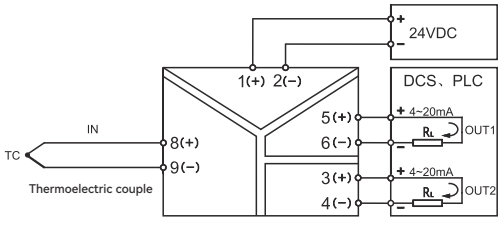
Technical data		
Input	Input signal (factory setting according to customer requirements)	Thermocouple K, E, T, J, N, R, S, B See Appendix 1 for parameters
Exportation	Output signal	4~20mA, 0~20mA, 1~5V, 0~5V(For other signals, please consult the business department)
	Maximum output current	≤24mA(abnormal operation)
	Maximum output voltage	≤18V(output open circuit)
	Alarm indication	Red LED
	Alarm output current (current output only)	The input open-circuit alarm output is about 22mA
	Load (current/voltage)	≤550 Ω / ≥2K Ω
	Conversion accuracy	See attachment 1
	Temperature coefficient	≤100ppm/K
	Response time	<1s
Power source	Supply voltage	24VDC±10% (maximum allowable range: 20~30VDC)
	Power consumption	<30mA (24VDC power supply)
	Power supply protection	Reverse protection
General characteristic	Temperature drift	0.01% F.S./℃
	Cold end temperature error	±1℃(-20~+60℃)
	Operating temperature	-20~+60℃
	Storage temperature	-40~+85℃
	Overall dimension	110mm*120mm*13mm (L * H * W)
	Weight	~100g
Insulation parameter	Standard	EN 61010-1
	EMC Standard	IEC 61000-6-2； IEC 61000-6-4
	Isolation voltage	2kV AC@1min
	Creepage distance and electrical clearance	≥3.0mm

QT2T	-	K	0	A	0	/	A1
Series		1 Input channel	Reserved code	1 Input channel	2 Input channel		Detection range code

Wiring diagram



one in one out



one in two out

- Factory
- R&D Center
- Business office
- DI Partner

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Version No :PM-QM01