Electric Actuated (E) Ball Valves

Ordering Part No. =
(e.g., **E 1/2-3-S**)

E	1/2	-	-	-	3-S

Fitting Name	
Electric Actuated	**E**

Port Size (in)
1/2
3/4
1
1 1/4
1 1/2
2
2 1/2
3
4

Connection	
NPT	**(leave blank)**
Tri-Clamp	**C**
Flange	**F**
BSPP	**G**
BSPT	**R**
Socket Weld	**S**
Butt Weld	**W**

Valve Type	
2 Way, Normally Closed	**(leave blank)**
2 Way, Normally Open	**O**
3 Way	**L**
3 Way	**T**

Valve Material	
316 Stainless	**(leave**

Options		
Coil Voltage	24VDC	**2**
	24VAC	**2A**
	110VAC 50/60HZ	**3**
	220VAC 50/60HZ	**4**
Control Signal	Light Indicator	**(leave blank)**
	Contact Signal	**S**
	1K, 5K	**R**
	4-20 mA (for Proportional Control)	**T**

Electric Actuator	Part No.	Torque	Cycle Time	Weight	Special function	Control Signal	Ball Valve Size, NPT Diameter (DN)	Butterfly Valve Size Diameter (DN)	Rotation
	E-05	50N * M	20S	2.6Kg	On-off Light	Light Indicator	1/2" to 1 1/2" (15-40)	1" to 2 1/2" (32-65)	90°
	E-10	100N * M	30/60S	3.7Kg			2" to 2/1/2" (50-65)	2" to 4" (50-125)	
	E-20	200N * M	30/60S	6.7Kg			2 1/2" to 3" (65-80)	6" to 8" (150-200)	
	E-40	400N * M	30/60S	7.2Kg			3" to 4" (80-100)	8" to 10" (200-250)	
	E-60	600N * M	45S	7.3Kg			4" (100-125)	10" to 12" (250-300)	
	E-100	1000N * M	50S	7.3Kg			6" (125-150)	12" to 16" (300-400)	
	E-200	2000N * M	100S	11.2Kg			6" to 12" (150-300)	18" to 28" (450-700)	
	E-05S	50N * M	20S	2.6Kg	Passive Contact	S = Contact Signal	1/2" to 1 1/2" (15-40)	1" to 2 1/2" (32-65)	90°
	E-10S	100N * M	30/60S	3.7Kg			2" to 2/1/2" (50-65)	2" to 4" (50-125)	
	E-20S	200N * M	30/60S	6.7Kg			2 1/2" to 3" (65-80)	6" to 8" (150-200)	
	E-40S	400N * M	30/60S	7.2Kg			3" to 4" (80-100)	8" to 10" (200-250)	
	E-05R	50N * M	20S	2.6Kg	Opening Signal	R = Potentiometer (1-5K)	1/2" to 1 1/2" (15-40)	1" to 2 1/2" (32-65)	90°
	E-10R	100N * M	30/60S	3.7Kg			2" to 2/1/2" (50-65)	2" to 4" (50-125)	
	E-20R	200N * M	30/60S	6.7Kg			2 1/2" to 3" (65-80)	6" to 8" (150-200)	
	E-40R	400N * M	30/60S	7.2Kg			3" to 4" (80-100)	8" to 10" (200-250)	
	E-05T	50N * M	20S	2.6Kg	Proportional Control	T=4-20mA	1/2" to 1 1/2" (15-40)	1" to 2 1/2" (32-65)	90°
	E-10T	100N * M	30/60S	3.7Kg			2" to 2/1/2" (50-65)	2" to 4" (50-125)	
	E-20T	200N * M	30/60S	6.7Kg			2 1/2" to 3" (65-80)	6" to 8" (150-200)	
	E-40T	400N * M	30/60S	7.2Kg			3" to 4" (80-100)	8" to 10" (200-250)	

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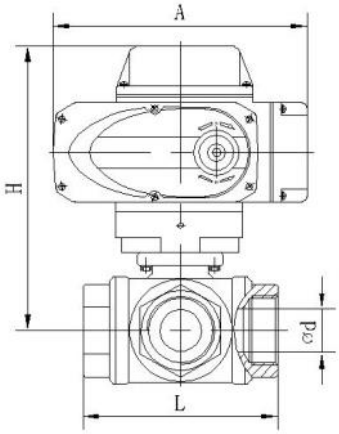
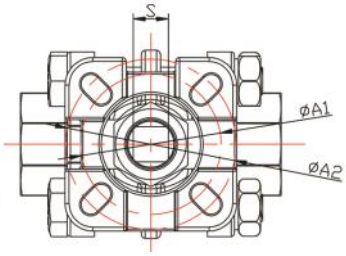
Electric Actuated Ball Valve Size & Specifications

Actuated Valve Body Specifications	
Valve Body & Ball	316 Stainless Steel / CF8M
Seat Seals & Packing	PTFE
Service Medium	Air, Gas, Liquid, Steam, Water
Operating Pressure	1/2" to 2": 1000 PSI @ 100ºF WOG 2 1/2": 800 PSI @ 100ºF WOG
Media Temperature	-60 to 450 °F (-21 TO 232 ºC)
Ambient Temperature	-4 to 176 °F (-20 TO 80 ºC)
Maximum Viscosity	600 mm2/s
Installation Orientation	Any Orientation
Mounting standard	DIN 3203-M3, ISO 5211 MOUNTING PAD, ISO5211 PLATFORM
Port	2 Way: Full Port 3 Way: Reduced Port

Main Parts and Materials			
No	Part Name	Material	Qty
1	SEAT	PTFE	2
2	BALL	SS316	1
3	JOINT GASKET	PTFE	1
4	CAP	SS316	1
5	BODY, BODY CONNECTOR	SS316/ CF8M	1, 2
6	STEM	SS316	1
7	THRUST WASHER	PTFE	1
8	STEM PACKING	PTFE	1
9	GLAND NUT	SS304	1
10	STEM WASHER	SS304	1
11	STEM NUT	SS304	1
14	BODY CONNECTOR BOLT	SS304	4
15	BODY CONNECTOR NUT & WASHER	SS304	4





Actuated Valve Body Dimensions (mm)									
2 WAY	3 WAY	SIZE	Actuator Mounting: ISO05211		Electric Actuator Size (MM)				
Part No.	Part No.	NPT	A1/(MM)	A2/(MM)	d, Orifice	L	A	H	Actuator
V3-1/2-A	V-1/2-L-A	1/2”	F03/36	F04/42	10	68	55	103	E-02
V3-3/4-A	V-3/4-L-A	3/4"	F03/36	F04/42	15	78	55	112	E-02
V3-1-A	V-1-L-A	1"	F04/42	F05/50	18	86	160	164	E-05
V3-1 1/4-A	V-1 1/4-L-A	11/4"	F04/42	F05/50	25	111	160	178	E-05
V3-1 1/2-A	V-1 1/2-L-A	11/2"	F05/50	F07/70	32	126	160	188	E-05
V3-2-A	V-2-L-A	2"	F05/50	F07/70	40	143	198	230	E-10
V3-2 1/2-A	V-2 1/2-L-A	21/2"	F07/70	F10/102	50	200	255	290	E-20

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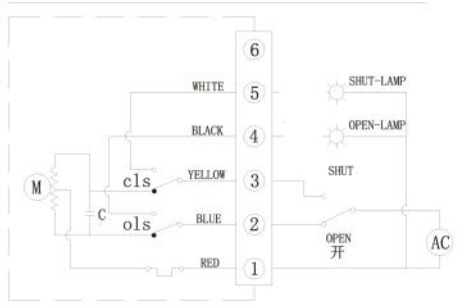
Electric Actuator Specifications

Electric Actuator Specifications		
Model	E-02	E-05 to 200
Operating Temperature & RH	60-130 ºF, 10-90%RH	-22 to 140 ºF (-30 to 60 ºC) , 10-90%RH
Electrical Protection	IP 65	IP 68
Installation Position	Any Orientation	Any Orientation
Voltage Options	24VDC, 110 & 220 VDC (50/60HZ)	24VDC, 110 & 220 VDC (50/60HZ)
Enclosure	Die-Cast Aluminum (Powder Coated)	Die-Cast Aluminum Alloy (Powder Coated)

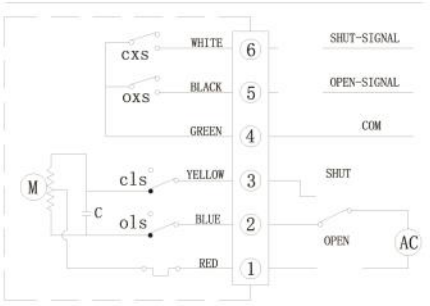
	Model	Torque	Cycle Time DC/AC	Drive Motor 24DC	Drive Motor 24-380AC	Weight	Special function	Signal	Ball Valve Diameter (DN)	Butterfly Valve Diameter (DN)	Rotation
	E-02	6N * M	7S		4.6W	0.5Kg	On-off light	Light Indicator	15-20		90°
	E-05	50N * M	7S/20S	10W	15W	2.6Kg	On-off light	Light Indicator	15-40	32-65	90°
	E-10	100N * M	10S/30S	20W	25W	3.7Kg	On-off light	Light Indicator	50-65	50-125	90°
	E-20	200N * M	12S/30S	40W	40W	6.7Kg	On-off light	Light Indicator	65-80	150-200	90°
	E-40	400N * M	15S/30S	70W	90W	7.2Kg	On-off light	Light Indicator	80-100	200-250	90°
	E-60	600N * M	20S/45S		90W	7.3Kg	On-off light	Light Indicator	100-125	250-300	90°
	E-100	1000N * M	NA/30S		100W	7.3Kg	On-off light	Light Indicator	125-150	300-400	90°
	E-200	2000N * M	NA/100S		100W	11.2Kg	On-off light	Light Indicator	150-300	450-700	90°
	E-02S	6N * M	7S		4.6W	0.5Kg	On-off light	Light Indicator	15-20		90°
	E-05S	50N * M	20S	10W	15W	2.6Kg	Passive contact	contact signal	15-40	32-65	90°
	E-10S	100N * M	30/60S	20W	25W	3.7Kg	Passive contact	contact signal	50-65	50-125	90°
	E-20S	200N * M	30/60S	40W	40W	6.7Kg	Passive contact	contact signal	65-80	150-200	90°
	E-40S	400N * M	30/60S	70W	90W	7.2Kg	Passive contact	contact signal	80-100	200-250	90°
	E-60S	600N * M	45S		90W	7.3Kg	Passive contact	contact signal	100-125	250-300	90°
	E-100S	1000N * M	50S		100W	7.3Kg	Passive contact	contact signal	125-150	300-400	90°
	E-200S	2000N * M	100S		100W	11.2Kg	Passive contact	contact signal	150-300	450-700	90°
	E-02R	6N * M	7S		4.6W	0.5Kg	On-off light	Light Indicator	15-20		90°
	E-05R	50N * M	20S	10W	15W	2.6Kg	1K、5K potentiometer	Opening signal	15-40	32-65	90°
	E-10R	100N * M	30/60S	20W	25W	3.7Kg	1K、5K potentiometer	Opening signal	50-65	50-125	90°
	E-20R	200N * M	30/60S	40W	40W	6.7Kg	1K、5K potentiometer	Opening signal	65-80	150-200	90°
	E-40R	400N * M	30/60S	70W	90W	7.2Kg	1K、5K potentiometer	Opening signal	80-100	200-250	90°
	E-60R	600N * M	45S		90W	7.3Kg	1K、5K potentiometer	Opening signal	100-125	250-300	90°
	E-100R	1000N * M	50S		100W	7.3Kg	1K、5K potentiometer	Opening signal	125-150	300-400	90°
	E-200R	2000N * M	100S		100W	11.2Kg	1K、5K potentiometer	Opening signal	150-300	450-700	90°
	E-02T	6N * M	7S		4.6W	0.5Kg	On-off light	Light Indicator	15-20		90°
	E-05T	50N * M	20S	10W	15W	2.6Kg	Proportional Control	4-20mA	15-40	32-65	90°
	E-10T	100N * M	30/60S	20W	25W	3.7Kg	Proportional Control	4-20mA	50-65	50-125	90°
	E-20T	200N * M	30/60S	40W	40W	6.7Kg	Proportional Control	4-20mA	65-80	150-200	90°
	E-40T	400N * M	30/60S	70W	90W	7.2Kg	Proportional Control	4-20mA	80-100	200-250	90°
	E-60T	600N * M	45S		90W	7.3Kg	Proportional Control	4-20mA	100-125	250-300	90°
	E-100T	1000N * M	50S		100W	7.3Kg	Proportional Control	4-20mA	125-150	300-400	90°
	E-200T	2000N * M	100S		100W	11.2Kg	Proportional Control	4-20mA	150-300	450-700	90°

Electric Actuator Wiring Diagrams

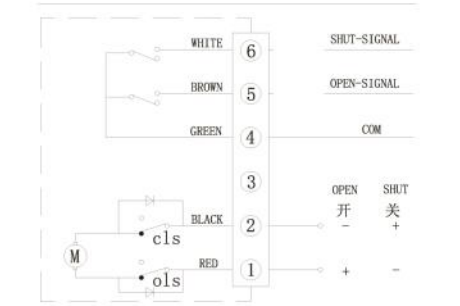
B type：ON-OFF TYPE WIRING DIAGRAM （standard）



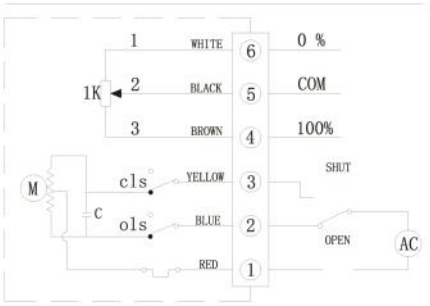
S type：PASSIVE CONTACT SIGNAL WIRING DIAGRAM



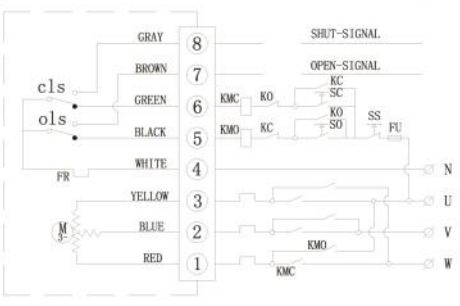
D type：ON-OFF TYPE QIRING DIAGRAM (VOLTAGE:DC)



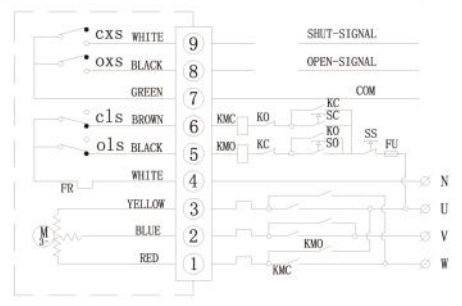
R type：WITH 1K OR 5K POTENTIOMETER



H type：AC380V ON-OFF TYPE WIRING DIAGRAM

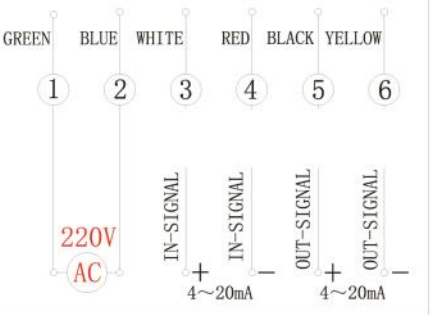


T type：AC380V PASSIVE CONTACT SIGNAL WIRING DIAGRAM



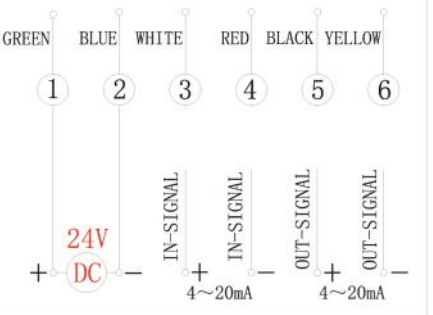
PROPORTIONAL CONTROL

A type：INTELLIGENT REGULATOR TYPE (VOLTAGE:AC)



PROPORTIONAL CONTROL

A type：INTELLIGENT REGULATOR TYPE (VOLTAGE:DC)



Maintenance Guide

Note: This valve is designed to last for an extended time period. However, common maintenance is necessary. If a leak begins to develop on the valve body, please consult these common maintenance procedures for a solu-

Warning: When tightening any connections to the valve, do not use the actuator as leverage. Doing so may damage the joint between the actuator and the valve.

Tightening the seal between the valve and the actuator:

This valve does not have a dynamic seal (i.e. no spring), therefore as the valve ages, the seal between the valve and the actuator body must be periodically tightened manually.

1. Remove the four bolts underneath the actuator.
2. Separate the actuator from the valve.
3. Tighten the nut on the top of the valve body. See figure one for location.
4. Place the actuator back on the valve and screw everything back into place.

Tightening the seals between the valve and the inlet/outlet ports:

Leaks developing in the inlet/outlet ports are often caused by inconsistent tightening of the torque bolts on the valve body. If this occurs, make sure to use a consistent method of tightening these bolts to ensure consistent torque.

1. Remove the torque bolts and check for any debris or damage to the gaskets.
2. Use a torque wrench or other consistent method of tightening the torque bolts to reconnect the inlet and outlet ports. Standard torque tables should be followed based on the size of the bolts.

Reference Figures:

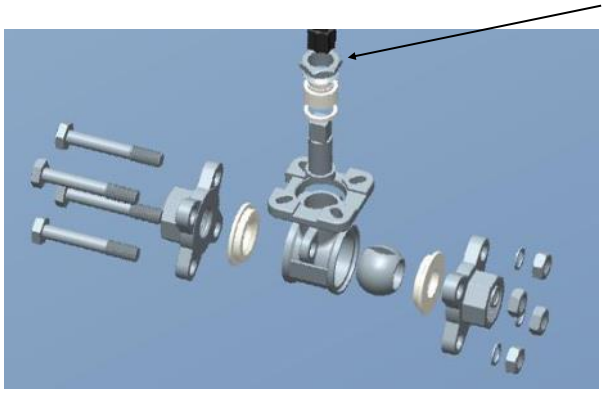


Figure 1: Exploded view of valve body with tightening nut indicated.

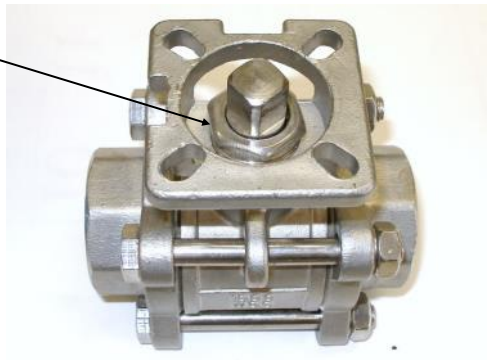


Figure 2: Valve Body without actuator with tightening nut indicated.

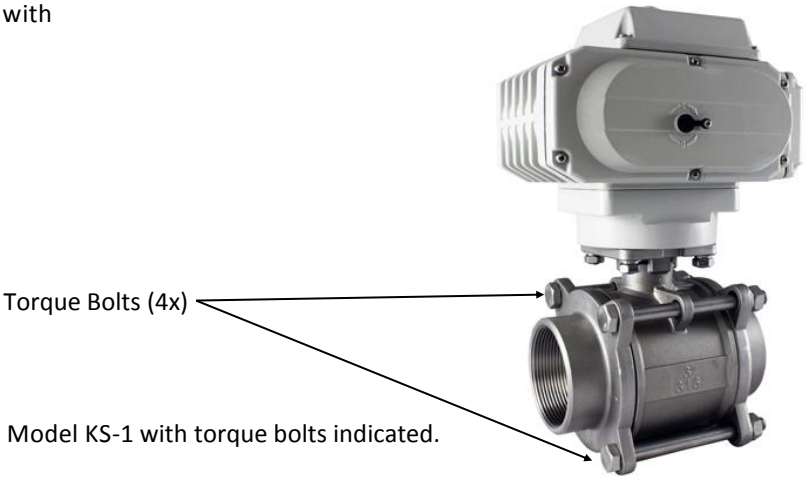
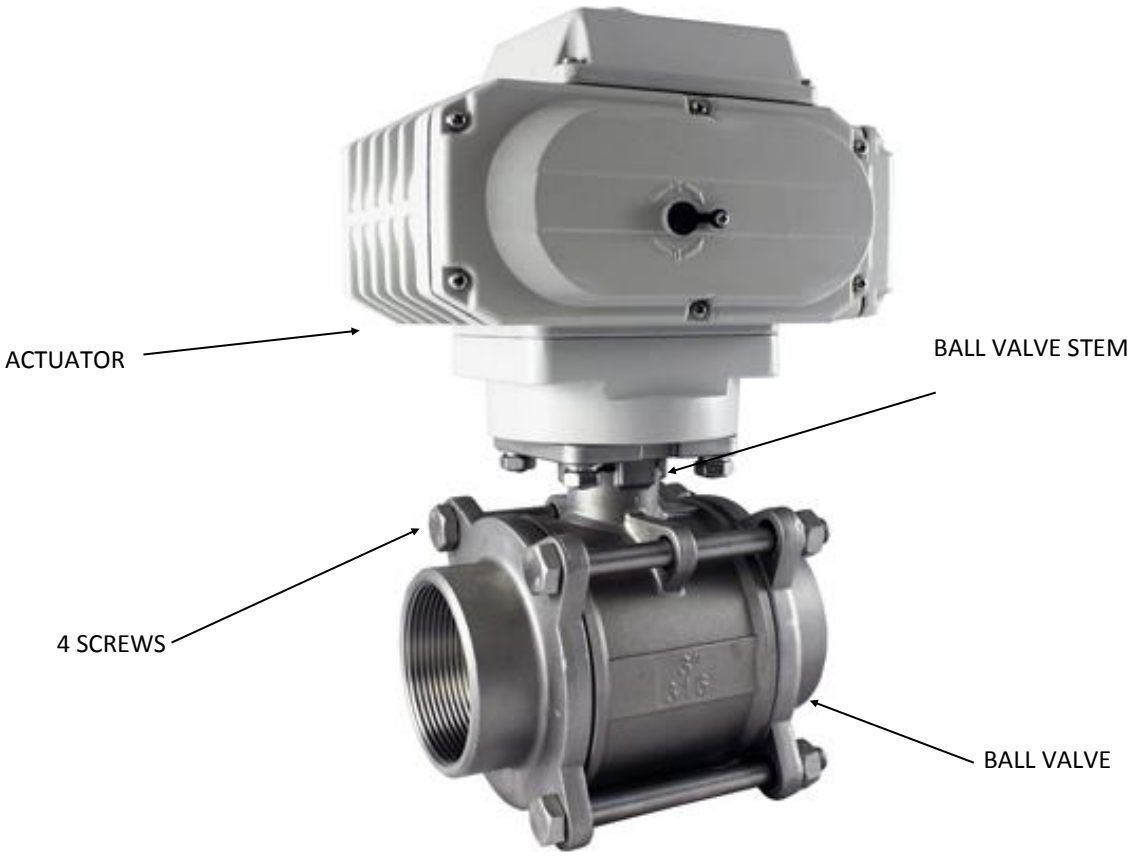


Figure 3: Model KS-1 with torque bolts indicated.

Reconfiguration



To re-configure a normally closed valve to a normally open valve:

1. Turn off the power supply to the ACTUATOR
2. Remove the 4 SCREWS on the bottom of the ACTUATOR
3. Remove the BALL VALVE from the ACTUATOR
4. Turn the BALL VALVE STEM on the ball valve 90 degree such at the valve is fully open (visually inspect the ball to make sure it is open)
5. Put the BALL VALVE back into the ACTUATOR and re-install the 4 SCREWS.

Terms and Conditions

SHIPMENTS:

All shipments are F.O.B. 892 Commercial Street, Palo Alto, CA 94303, USA. Most orders are shipped via UPS Standard Ground unless instructions accompany order. Outside the UPS zones, shipment will be made Best Way. The responsibility for goods delay, lost or damaged in transit rests with the carrier and purchaser. Purchaser may purchase shipping insurance to cover lost or damaged products caused by shipping.

RETURN OF MERCHANDISE:

No merchandise is accepted for return 30 days after delivery date. No credit allowed on merchandise shipped as ordered and returned without obtaining an authorization number IN ADVANCE. A 20% restocking charge applies to all returns, and transportation charges must be fully prepaid. We will pay **ground** transportation charges on re-sent or returned merchandise due to STC's error.
Shortages & Mis-Shipments: Any shortages or mis-shipment must be reported within 15 days.

Remittances should be sent to:

Sizto Tech Corporation

892 Commercial Street, Palo Alto, CA 94303, USA

Credit Card Payments: Visa, MasterCard, Discover, or American Express Accepted

International Customers: Advance Payment Required via Bank Wire, Cashier's Check or Approved Credit Card.

Credit Application: To establish a net 30 day account, please mail or fax three trade references with complete mailing addresses and account numbers.

LIMITED WARRANTY – IMPORTANT NOTICE TO PURCHASER:

Sizto Tech Corporation (STC) only warrants this product to be free from defects in materials and workmanship at the time of shipment. This limited warranty expires one year after delivery to the end-user. STC's entire obligation to the Purchaser for breach of this limited warranty shall be limited to replacement of the defective product or refund of the original purchase price of this product, at STC's option. Purchaser has thirty (30) days to return the goods after STC has agreed to accept the return. All freight charges on returned material shall be paid by the Purchaser. STC's limited warranty shall not apply, however, to the product that have been subjected to misuse, alteration, accident or negligence during handling or storage.

DISCLAIMER OF IMPLIED WARRANTIES:

All implied warranties, which may arise by implication of law or application of course of dealing or usage of trade, including, but not limited to, implied warranties of merchantability or fitness for a particular purpose are expressly excluded. There are no warranties, which extend beyond the description of the faced hereof. The end user is solely responsible for the suitability and fitness of this product selected for a particular application.

IMPORTANT NOTICE:
All prices are subject to change without notice. We continuously improve the products, and we reserve the right to change specifications without incurring any obligation to incorporate new factors in equipment previously sold.

S T C
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