Hermetic interconnect solutions

NIMBUS

Lightweight Hermetic Pin and Socket Connectors







martec®
an Amphenol® company

Perfect Connections for Mission Critical Applications

www.martec.solutions

Who we are and what we do



Perfect connections for mission-critical applications

Our connectors and penetrators are the ideal hermetic solution for both power and data.

Martec products represent the very forefront of technology for applications where performance, quality and reliability are needed most.

Since 1987, we have designed and manufactured high-quality precision components from our world-class, purpose-built manufacturing site in Whitstable, UK.

Acquired by the Amphenol Corporation in March 2016, Martec continues with the additional security, financial support and backing of a highly recognised and successful global interconnect organisation.

Martec has become Amphenol's global centre of excellence for the design, development and manufacture of hermetics and glass-to-metal seals, with many years of experience with exotic materials and harsh environments where high pressures and temperatures put our products to the test.

With the combined expertise of a stable workforce, a programme of continuous investment and a forward-thinking environmental policy, Martec has the vision, strength and resources to meet and exceed customer expectations today and long into the future.

Testament to our reputation as a trusted business is Martec's first ever customer, from 1987, still being a client today, an impressive 37 years after their first order.



A culture of interactive innovation

We ensure that our products continue to challenge the norm when it comes to innovation by initiating regular product development lifecycles. This allows us to update our connectors and penetrators and apply our latest research and development to our range.

We can apply continuous innovation to our customers' solutions, even when requirements vary between conceptualisation and acceptance. We apply this mindset to existing products as well as one-off custom products developed for specific use cases.

Our experience has taught us that successful engineering projects result from clearly defined objectives, effective implementation and strong attention to detail.



Our Project Development Objectives

1. Concept

Whether using standard or custom products, we will work closely with you to develop the right solution.

2. Initial development

We will work with you to create several working prototypes that meet all of the criteria specific to your project.

3. Full development

After reviewing the prototype options, we will develop the most effective into a fully functional product.

4. Qualification, testing and verification

We can support the qualification process through testing and acceptance test reports.

5. Pre-production

After our in-depth qualification phase, we will review all of our findings and support your product readiness reviews.

6. Production

Our expert manufacturing team will manage the entire production process with vigilance.

7. Obsolescence management

We will help to manage obsolescence by ensuring alternative solutions remain fit for purpose.

Nimbus Range MLTV Hermetic Pin & Socket



Martec presents the Nimbus range – a series of high-performance hermetic connectors designed and manufactured exclusively for demanding applications where integrity is crucial.

Our Nimbus aluminium connectors bring reliability and performance to electronic systems throughout the Aerospace, Military, Space and Motorsport industries.

Key Features

- → Up to 30% lighter than Stainless Steel
- → Proprietary pin and socket contact receptacles derived from MIL-DTL-38999 Series III (NON-QPL)
- → Solder cup contacts available
- → Coupling method – Anti vibration Tri Start Thread
- → Box mount and bulkhead mount available
- → Operating Temperature -55°C to 125°C
- → Hermetically sealed receptacle ensures complete component protection.

The key feature of our Nimbus range is up to 30% weight saving per connector compared to stainless steel. We are proud to have achieved the sealing of copper beryllium to glass which ensures the integrity of the connection and can withstand the stresses of harsh environments. We've made finding the mating half easy by manufacturing to industry standard planforms. These features come as standard across the Nimbus range, making our hermetic connectors some of the most reliable and dependable in the world.



Technical Specifications

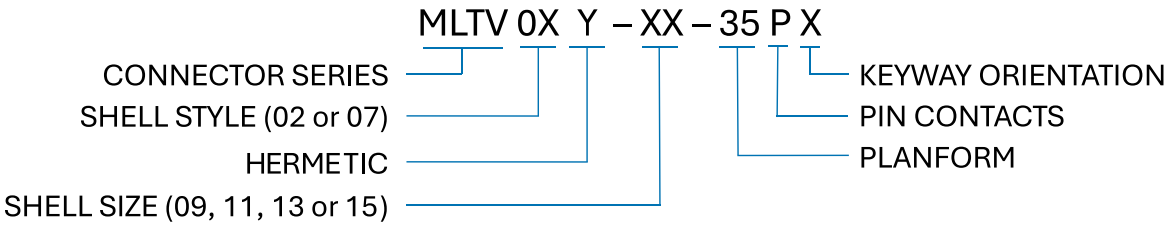
- **Design standard:** MIL-DTL-38999 Series III (NON-QPL)
- **Planform arrangement derived from MIL-DTL-38999:** 09-35, 11-35, 13-35, 15-35
- **Contact sizes:** MIL-DTL-D38999 (Size 22)
  Shell Material: Aluminium Alloy
- **Insulation:** Glass
- **Contact material:** Beryllium Copper
- **Contact Plating:** Hard gold plate 1.25 – 5.0µm with semi-bright nickel underplate 5.0 – 10.0µm
- **Shell Material:** Aluminium 6061 T6
- **Shell Finish:** Electroplated nickel 5.0 – 10.0 µm
- **Leak rate:** < 1 × 10-7 cc/sec (He)
- **Maximum temperature:** 125°C
- **Insulation resistance:** > 5000 M Ohm @ 500 Vdc @ambient (reduced @ temperature)

Experience our superior hermetic connectors and feedthroughs – a must-have for any high-demand environment where a reliable, high-performing connector is key. Get in touch today.

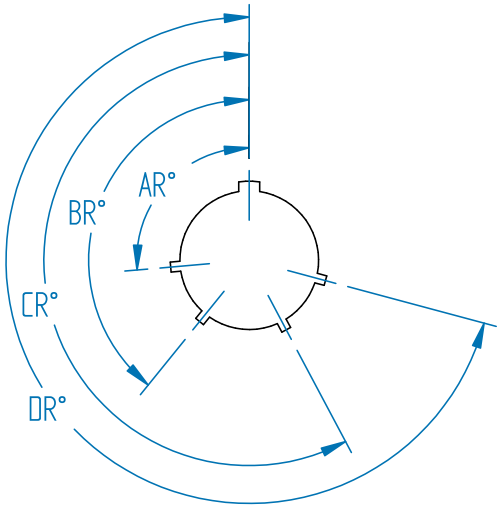
Contact our factory for further information
Tel: +44 (0)1227 287 781 | Email: sales@martec.ltd.uk



How to order



Receptacle
Front face shown



Alternative keying position

A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The angles for a given connector are the same whether it contains pins or sockets. Master key stays fixed; minor keys rotate. Inserts are not rotated in conjunction with master key/keyway.

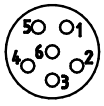


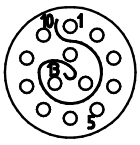
Keyway positional data

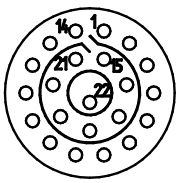
Shell Size	Key & Keyway Arrangement Identification Letter	AR°	BR°	CR°	DR°
9	N*	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
	E	91	131	197	240
11, 13, 15	N*	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
	D	119	146	176	298
	E	51	141	184	242

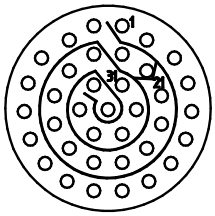
Availability, arrangement and identification

	9-35	11-35	13-35	15-35
# of contacts	6	13	22	37
Contact size	22D	22D	22D	22D

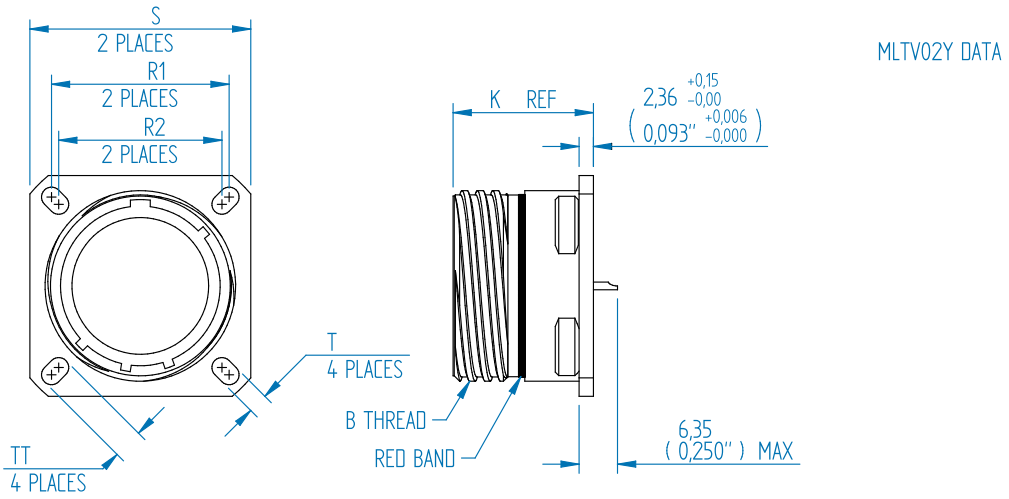








MLTV02
Technical drawing



Dimensions

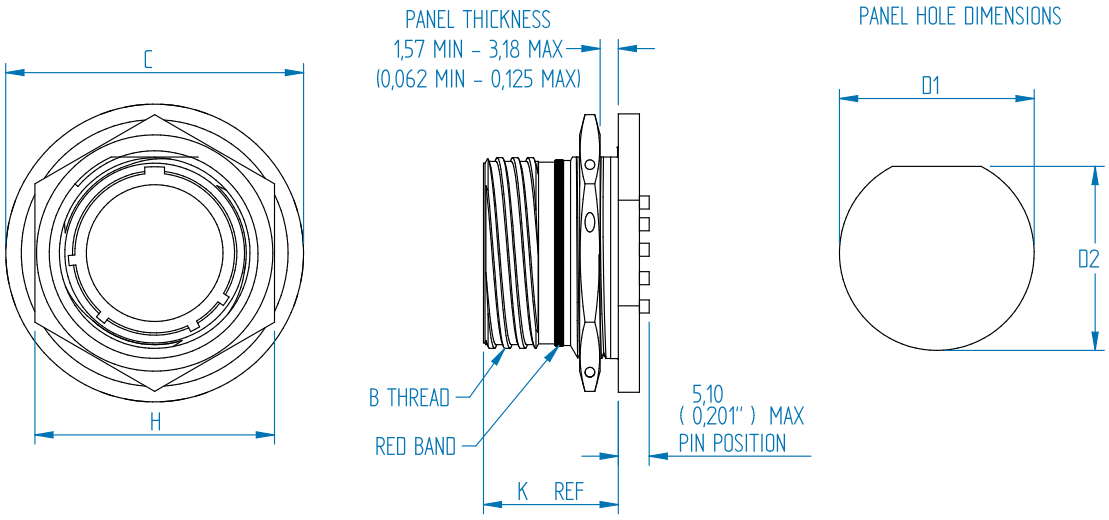
Shell Size	B Thread 0,1P-0,3P-TS	R1	R2	S ±0,010	T ±0,008	TT ±0,008	K (Pin Version)	K (Socket Version)
9	0,625	0,719	0,594	0,938	0,128	0,216	0,913	1,043
11	0,750	0,812	0,719	1,031	0,128	0,194	0,913	1,043
13	0,875	0,906	0,812	1,125	0,128	0,194	0,913	1,043
15	1,000	0,969	0,906	1,219	0,128	0,173	0,913	1,043

All dimensions in inches

Shell Size	R1	R2	S ±0,25	T ±0,2	TT ±0,2	K (Pin Version)	K (Socket Version)
9	18,26	15,09	23,83	3,25	5,49	23,2	26,5
11	20,62	18,26	26,19	3,25	4,93	23,2	26,5
13	23,01	20,62	28,58	3,25	4,93	23,2	26,5
15	24,61	23,01	30,96	3,25	4,93	23,2	26,5

All dimensions in mm

MLTV07
Technical drawing



Dimensions

Shell Size	B Thread 0,1P-0,3P-TS	C Max	D1 +0,010 -0,000	D2 +0,000 -0,010	H Hex +0,017 -0,016	K (Pin Version)	K (Socket Version)
9	0,625	1,062	0,693	0,657	0,875	0,871	0,934
11	0,750	1,250	0,825	0,770	1,000	0,871	0,934
13	0,875	1,375	1,010	0,955	1,188	0,878	0,941
15	1,000	1,500	1,135	1,085	1,312	0,878	0,941

All dimensions in inches

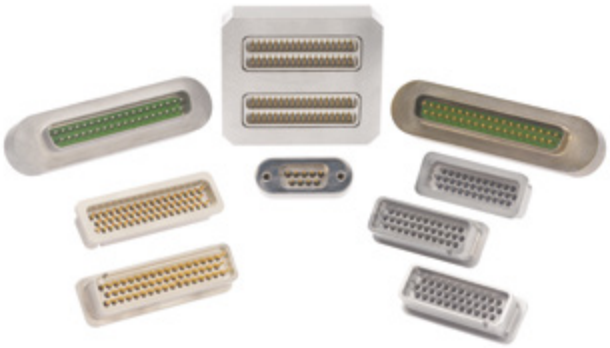
Shell Size	C Max	D1 +0,25 -0,00	D2 +0,00 -0,25	H Hex +0,43 -0,41	K (Pin Version)	K (Socket Version)
9	26,98	17,60	16,70	22,23	22,12	23,73
11	31,75	20,96	19,59	25,40	22,12	23,73
13	34,93	25,65	24,26	30,18	22,30	23,92
15	38,10	28,83	27,56	33,32	22,30	23,92

All dimensions in mm

The lighter choice

Aluminium is the ideal material for applications where weight savings are crucial – the combination of lightweight properties and strength make it a preferred choice for various applications, especially where weight reduction is a critical factor.

Martec's expertise and versatility in manufacturing allows for precise standards and tolerance, ensuring the aluminium solution we manufacture meets the specifics of different industries and customers. Components including aluminium feedthroughs, D-Subs, Micro D and Nano D not only offer a lighter solution but also maintain high performance standards and can be tailored to meet our customers mission critical criteria.





They will not only save weight in applications where agility is key but also offer compact, slimline solutions where space is limited and accessibility is essential.



Customise your connectors

Customisation is key in meeting the unique needs in various industries. Our engineering team specialises in tailoring interconnect solutions to specific requirements, guaranteeing a perfect fit for your application. Whether it is for Aerospace, Motorsport or any other industry where weight savings are paramount, our connectors crafted from aluminium, offer unmatched performance and reliability.









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