ACTIVSTONE®

REVOLUTIONARY PROTECTION
FOR LONG LIFE

WELD-IMMUNE SENSORS

IMPACT RESISTANCE

WELD-FIELD IMMUNITY

ANTI-SPATTER COATING

CONTRINEX

NEW ARRIVALS

ENHANCED RANGE OF PRODUCTS AND ACCESSORIES

JUST IN!

PIGTAIL SERIES

- Enhanced flex ratio
- Integrated LED in connector
- Also available with PTFE protective tube
- IO-Link
- ACTIVSTONE® anti-spatter coating

MINIATURE FLAT PACK

- Fully stainless steel
- Precise 2 mm sensing distance
- IO-Link
- ACTIVSTONE® anti-spatter coating

2-WIRE

- Fully stainless steel housing
- Ceramic face
- ACTIVSTONE® anti-spatter coating

HARSH ENVIRONMENT CABLES

- High temperature resistance – withstands temperatures up to 200°C or 260°C for version with protective tube
- IP69K protection
- Versatile length options – ranging from 0.6 m to 10 m

MOUNTING BRACKETS

- ACTIVSTONE® anti-Spatter coating
- Heavy-duty steel construction
- Wide sensor range (M8 to M30)

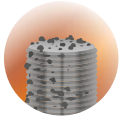
PROTECTIVE TUBES + MOUNTING TOOLS

- High temperature resistance – withstands temperatures up to 260°C
- Pre-slit design – allows quick and easy installation with the help of our mounting tools

WELD-IMMUNE

REVOLUTIONARY PROTECTION FOR LONG LIFE

CHALLENGES | **SOLUTIONS**



WELD SPATTER

- Reduced sensor performance
- Spatter accumulation and harsh cleaning
- Time-consuming sensor replacement

MAGNETIC FIELDS

- Interference with inductive sensor
- False triggering
- Locked-on sensor output

MOVING PARTS

- Collisions with moving workpieces
- Damage to ferrite, electronics and housing
- Costly machine downtime

ANTI-SPATTER COATING

ACTIVSTONE® high-integrity ceramic coating on all external surfaces resists abrasion and weld spatter in MIG, MAG and spot-welding applications. Applicable to sensors and accessories. See pages 4, 14 to 17.

WELD-FIELD IMMUNITY

Contrinex sensors are immune to magnetic interference from medium-frequency (MF) weld fields (current ≤ 15 kA) and 50Hz weld fields (amplitude ≤ 40mT). See page 5.

IMPACT RESISTANCE

With one-piece stainless-steel housings and Condet® technology, Full Inox sensors offer maximum impact resistance. See page 6.

ACCESSORIES

- **ACTIVSTONE®**-coated mounting brackets, cables and protective tubes offer specific protection against spatter and heat.

  See pages 14 to 17.

ANTI-SPATTER COATING

ACTIVSTONE® COATING

High-integrity ceramic

The ACTIVSTONE® SX coating provides long-term protection in welding applications. This high-performance ceramic layer forms an abrasion-proof, non-stick coating on all external surfaces of the sensor, preventing weld-spatter accumulation. The coating provides exceptional robustness in MIG, MAG and spot-welding applications and withstands frequent wire-brush cleaning. Coated mounting brackets are also available.

WITHSTANDS HARSH CLEANING

Welding equipment typically requires frequent, aggressive cleaning using wire brushes or dry ice. ACTIVSTONE® technology ensures that the Contrinex non-stick coating is exceptionally durable, offering an extended service life. Routine maintenance is fast and easy, maximizing uptime on busy production lines.

Highly durable coating for reduced sensor maintenance

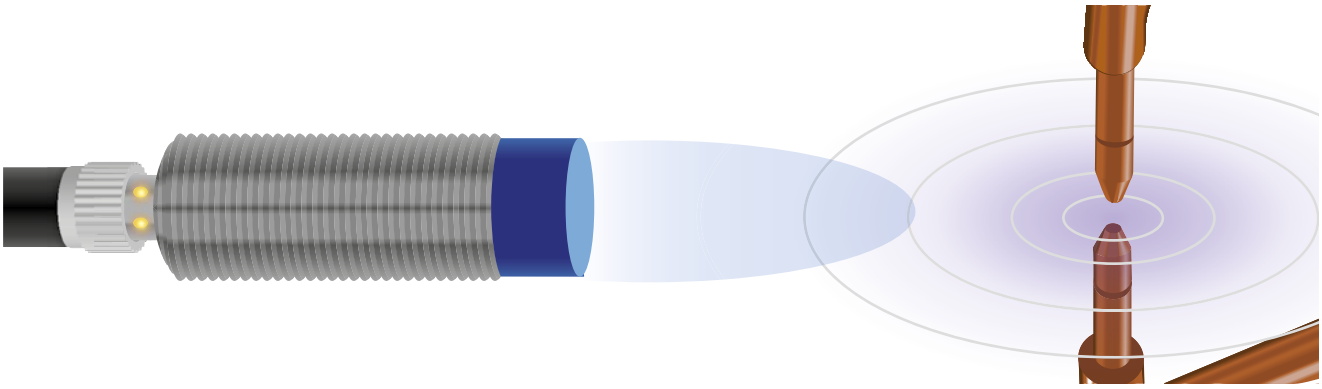
ADVANTAGES OF ACTIVSTONE® COATING

- Non-stick formula prevents weld-spatter accumulation
- Easy spatter and slag removal during maintenance
- High thermal resistance for extended service life and sensor reliability
- Outstanding resistance to abrasion and aggressive cleaning
- No delamination of coating when deformed
- Excellent impact resistance: no cracking or peeling

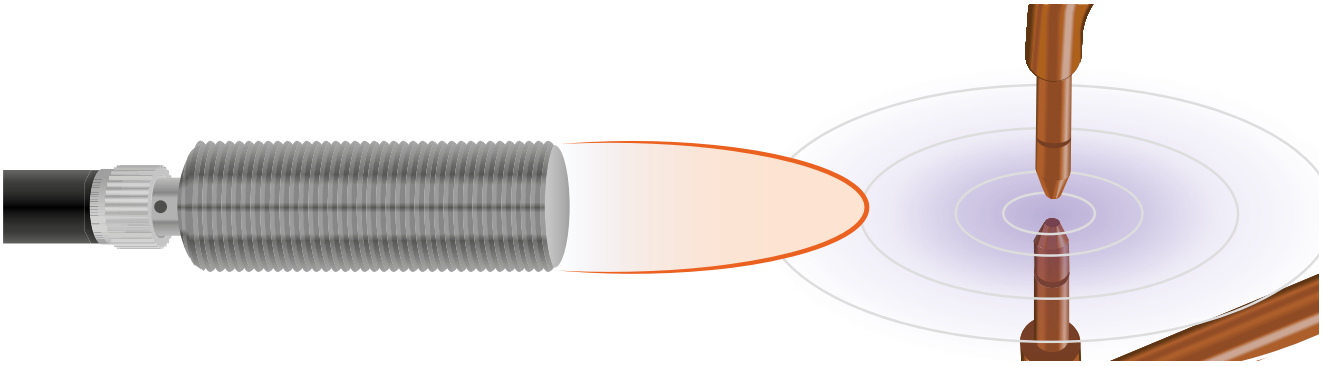
WELD-FIELD IMMUNITY

INTERFERENCE-SUPPRESSION TECHNOLOGY

Strong magnetic fields from welding equipment cause false triggering in unprotected inductive sensors. Weld-Immune sensors from the Full Inox and Classics technology families meet this challenge with innovative interference-suppression designs. Sensors benefit from optimum detection sensitivity (long range) combined with immunity to magnetic interference from 50Hz fields (amplitude ≤ 40mT) and MF welding stations (current ≤ 15 kA).



Unprotected conventional inductive sensor: the magnetic field from welding equipment disrupts the sensor's own magnetic field and causes false triggering.



Contrinex inductive sensor with immunity: the magnetic field from welding equipment does not affect sensor performance and the sensor detects targets correctly.

Insensitivity to magnetic fields

ADVANTAGES OF INTERFERENCE-SUPPRESSION TECHNOLOGY

- Immunity to magnetic interference from welding environment
- Targets are detected during welding without false triggering
- Factory-optimized detection sensitivity
- Long sensing range: increased or double operating distance reduces the risk of collisions
- Ideal for automated welding cells in the automotive industry
- Suitable for other environments with high-strength magnetic fields
- Reliable, proven technology

IMPACT RESISTANCE

FULL INOX TECHNOLOGY

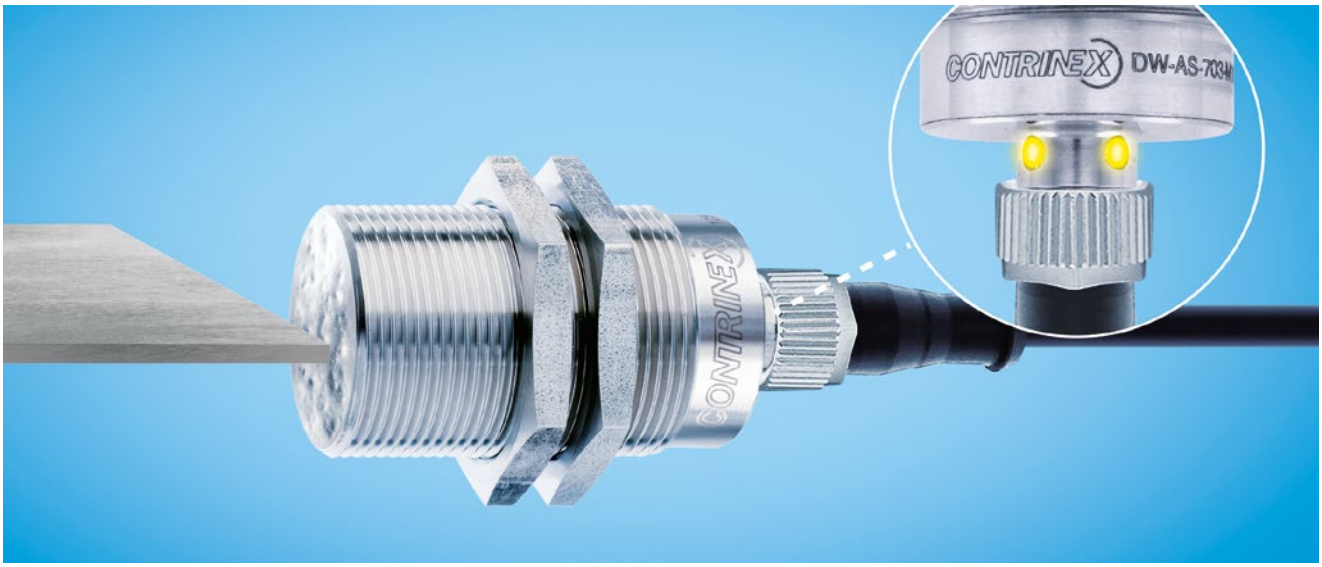
Sensors with Full Inox technology are ideal for the harshest welding environments. A one-piece stainless-steel housing (V2A/AISI 303) provides excellent chemical and mechanical resistance, withstanding extreme abrasion, shocks and vibration. Contrinex's exclusive Condet® technology ensures sensors operate reliably even after repeated impacts.

Full functionality even after heavy impact: Condet® technology ensures reliable switching, Even when impact damage to the ferrite is severe

High performance and extreme durability

ADVANTAGES OF CONDET® OPERATING PRINCIPLE

- Extended sensor life owing to robust housing and electronics
- Long operating distances reduce risk of collisions with moving parts
- Condet® technology ensures reliable switching, even when impact damage to the ferrite is severe
- One-piece, stainless-steel housing
- Resistance to harsh cleaning methods and impacts
- Sensitivity unaffected by weld spatter, metallic particles or chips
- Factor 1 on steel and aluminum
- Sealed housing IP68 and IP69K



PREMIUM QUALITY

NEW INNOVATION

ULTRA WELD 2-WIRE RANGE

2-Wire Weld-Immune sensor coated with ACTIVSTONE®

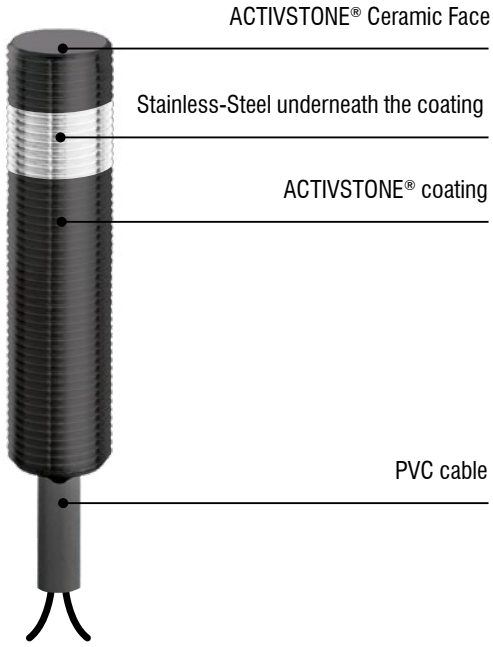
KEY ADVANTAGES

- **Superior impact protection:**
  Stainless-steel housing combined with the robust and high-strength ActivShield ceramic face ensures maximum durability in demanding environments.
- **Extreme Weld-Spatter resistance:**
  ACTIVSTONE® ceramic coating withstands molten metal and weld spatter, extending sensor lifespan.
- **Exceptional abrasion resistance:**
  Non-stick ACTIVSTONE® coating allows for easy cleaning and maintenance, reducing downtime.
- **Flexible installation:**
  10 to 65 VDC 2-wire configuration enables easy integration and provides a high switching frequency for fast, reliable operation.
- **Extended operating distance:**
  Reduces the risk of mechanical damage, ensuring stable performance even in challenging setups.
- **Fully sealed IP67 housing:**
  Provides complete protection against dust and water ingress, suitable for harsh industrial conditions.

Available housing sizes

M12 M18 M30

Suitable for harsh welding environments



PREMIUM QUALITY

ULTRA WELD GENERAL RANGE OVERVIEW

GENERIC INFO
Switching frequency = 15Hz
Full Stainless Steel V2A

ULTRA WELD RANGE

COATED FULL INOX HOUSING + DOUBLE OPERATING DISTANCE

Part Reference		Housing Size
DW-AS-703-M8-693		M8
DW-AS-703-M8-697		M8
DW-AS-701-M8-693		M8
DW-AS-701-M8-697		M8
DW-AV-703-M8-693		M8
DW-AV-701-M8-693		M8
DW-AD-703-M8-693	NEW	M8
DW-AD-701-M8-693	NEW	M8
DW-AS-703-M12-693		M12
DW-AS-701-M12-693		M12
DW-AV-703-M12-693		M12
DW-AV-701-M12-693		M12
DW-AD-703-M12-693	NEW	M12
DW-AD-701-M12-693	NEW	M12
DW-AS-703-M18-693		M18
DW-AS-701-M18-693		M18
DW-AV-703-M18-693		M18
DW-AV-701-M18-693		M18
DW-AD-703-M18-693	NEW	M18
DW-AD-701-M18-693	NEW	M18
DW-AS-703-M30-693		M30
DW-AS-713-M30-693		M30
DW-AS-701-M30-693		M30
DW-AV-703-M30-693		M30
DW-AV-701-M30-693		M30
DW-AD-703-M30-693	NEW	M30
DW-AD-701-M30-693	NEW	M30
DW-AV-703-C23-693		C23
DW-AV-701-C23-693		C23
DW-AD-703-C23-693	NEW	C23
DW-AD-701-C23-693	NEW	C23

Housing Length (mm)	Operating Distance (mm)	Polarity	IO-Link	Connection Type
60	3	PNP	YES	M8 3-pin
66	3	PNP	YES	M12 4-pin
60	3	NPN	NO	M8 3-pin
66	3	NPN	NO	M12 4-pin
45	3	PNP	YES	Pigtail M12 3-pin
45	3	NPN	NO	Pigtail M12 3-pin
45	3	PNP	YES	Cable 3-wire
45	3	NPN	NO	Cable 3-wire
60	6	PNP	YES	M12 4-pin
60	6	NPN	NO	M12 4-pin
50	6	PNP	YES	Pigtail M12 3-pin
50	6	NPN	NO	Pigtail M12 3-pin
50	6	PNP	YES	Cable 3-wire
50	6	NPN	NO	Cable 3-wire
63.5	10	PNP	YES	M12 4-pin
63.5	10	NPN	NO	M12 4-pin
50	10	PNP	YES	Pigtail M12 3-pin
50	10	NPN	NO	Pigtail M12 3-pin
50	10	PNP	YES	Cable 3-wire
50	10	NPN	NO	Cable 3-wire
63.5	16	PNP	YES	M12 4-pin
63.5	40	PNP	YES	M12 4-pin
63.5	16	NPN	NO	M12 4-pin
50	16	PNP	YES	Pigtail M12 3-pin
50	16	NPN	NO	Pigtail M12 3-pin
50	16	PNP	YES	Cable 3-wire
50	16	NPN	NO	Cable 3-wire
8	7	PNP	YES	Pigtail M12 3-pin
8	7	NPN	NO	Pigtail M12 3-pin
8	7	PNP	YES	Cable 3-wire
8	7	NPN	NO	Cable 3-wire

PREMIUM QUALITY

ULTRA WELD + EXTREME GENERAL RANGE OVERVIEW

GENERIC INFO
Switching frequency = 15Hz
Full Stainless Steel V2A

			Part Reference		Housing Size
ULTRA WELD RANGE	COATED FULL INOX HOUSING + DOUBLE OPERATING DISTANCE		DW-AS-713-M30-1313	NEW	C44
			DW-AV-703-R81-693*	NEW	R81
			DW-AV-703-R81-697*	NEW	R81
			DW-AV-701-R81-693*	NEW	R81
			DW-AV-701-R81-697*	NEW	R81
			DW-AD-703-R81-693	NEW	R81
			DW-AD-701-R81-693	NEW	R81
WELD EXTREME RANGE	FULL INOX HOUSING + DOUBLE OPERATING DISTANCE		DW-AS-701-M8-698		M8
			DW-AS-701-M8-673		M8
			DW-AS-703-M8-698		M8
			DW-AS-703-M8-673		M8
			DW-AV-703-M8-698*		M8
			DW-AV-703-M8-673*		M8
			DW-AV-701-M8-698*		M8
			DW-AV-701-M8-673*		M8
			DW-AS-703-M12-673		M12
			DW-AS-70A-M12-673		M12
			DW-AS-701-M12-673		M12
			DW-AS-70B-M12-673		M12
			DW-AV-703-M12-673*		M12
			DW-AV-701-M12-673*		M12
			DW-AS-703-M18-673		M18
			DW-AS-701-M18-673		M18
			DW-AV-703-M18-673*		M18
			DW-AV-701-M18-673*		M18
			DW-AS-703-M30-673		M30
			DW-AS-701-M30-673		M30
			DW-AV-703-M30-673*		M30
			DW-AV-701-M30-673*		M30

*All AV types available with protective tubes : DW-AP-xxx-xxx-xxx

Housing Length (mm)	Operating Distance (mm)	Polarity	IO-Link	Connection Type
63.5	38	PNP	YES	M12 4-pin
17	2	PNP	YES	Pigtail M12 3-pin
17	2	PNP	YES	Pigtail M8 3-pin
17	2	NPN	NO	Pigtail M12 3-pin
17	2	NPN	NO	Pigtail M8 3-pin
17	2	PNP	YES	Cable 3-wire
17	2	NPN	NO	Cable 3-wire
60	3	NPN	NO	M8 3-pin
66	3	NPN	NO	M12 4-pin
60	3	PNP	YES	M8 3-pin
66	3	PNP	YES	M12 4-pin
45	3	PNP	YES	Pigtail M8 3-pin
45	3	PNP	YES	Pigtail M12 3-pin
45	3	NPN	NO	Pigtail M8 3-pin
45	3	NPN	NO	Pigtail M12 3-pin
60	6	PNP	YES	M12 4-pin
60	6	PNP	YES	M12 4-pin
60	6	NPN	NO	M12 4-pin
60	6	NPN	NO	M12 4-pin
50	6	PNP	YES	Pigtail M12 3-pin
50	6	NPN	NO	Pigtail M12 3-pin
63.5	10	PNP	YES	M12 4-pin
63.5	10	NPN	NO	M12 4-pin
50	10	PNP	YES	Pigtail M12 3-pin
50	10	NPN	NO	Pigtail M12 3-pin
63.5	16	PNP	YES	M12 4-pin
63.5	16	NPN	NO	M12 4-pin
50	16	PNP	YES	Pigtail M12 3-pin
50	16	NPN	NO	Pigtail M12 3-pin

PREMIUM QUALITY

ULTRA WELD 2-WIRE RANGE OVERVIEW

GENERIC INFO
Switching frequency = 15Hz
Full Stainless Steel V2A

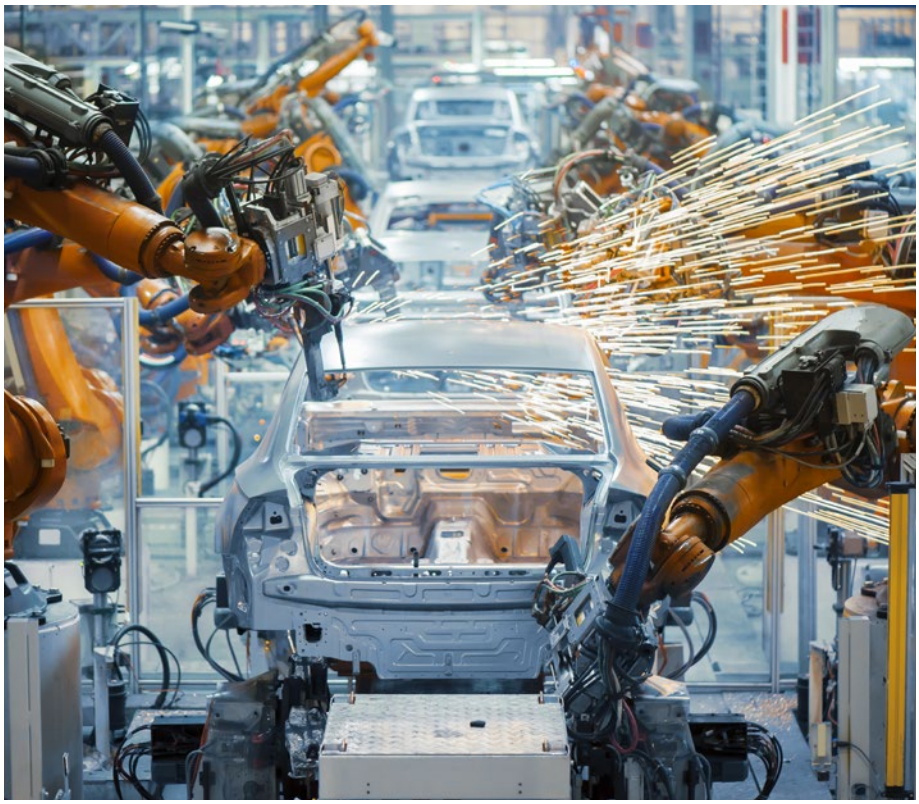
ULTRA WELD 2-WIRE RANGE

CERAMIC FACE + COATED 2-WIRE

Part Reference	**DW-DD-625-M12-1533** **NEW** With ceramic face	**DW-DD-625-M18-1533** **NEW** With ceramic face	**DW-DD-605-M30-1533** **NEW** With ceramic face
Housing Size	M12	M18	M30
Housing Length (mm)	50	50	50
Operating Distance (mm)	4	8	10
Output	Normally open	Normally open	Normally open
Connection Type	Cable 2-wire	Cable 2-wire	Cable 2-wire

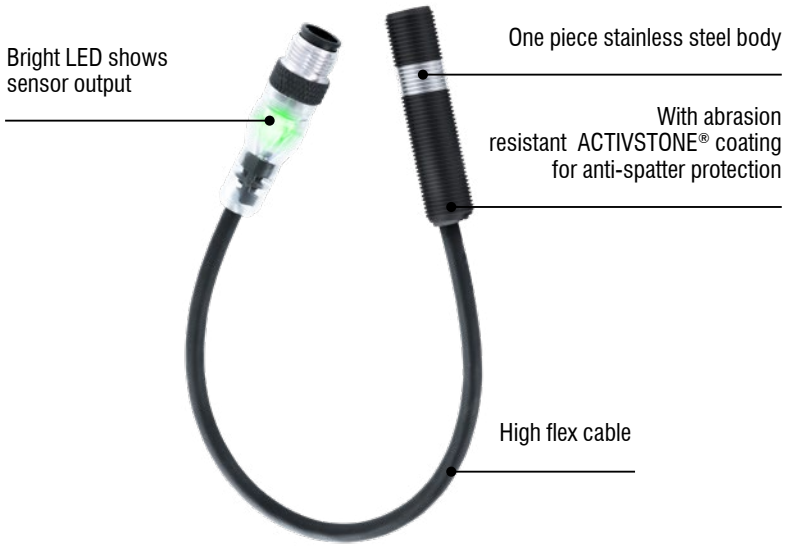
ULTRA WELD RANGE

The industry's most reliable and durable inductive sensors for harsh welding applications with ACTIVSTONE®.



MAKE YOUR WELDING APPLICATION INDESTRUCTIBLE

PIGTAIL VERSION



+ Add accessories

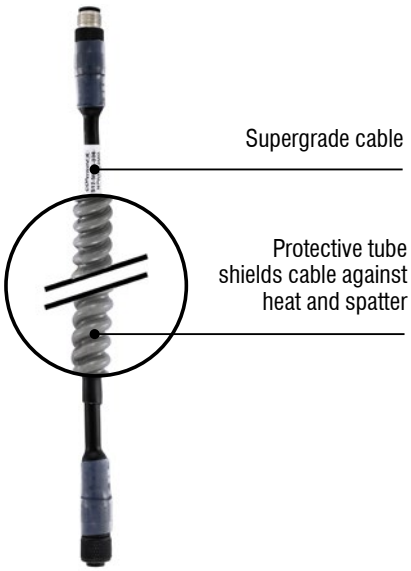
Protective tube shields cable against heat and spatter

Mounting tool allows easy protective tube installation

Coated mounting bracket absorbs impacts for enhanced sensor protection

CONNECTOR VERSION

+ Add supergrade cable
(Protective tube included)



+ Add accessories

Coated mounting bracket absorbs impacts for enhanced sensor protection

ACCESSORIES OVERVIEW

WELD-IMMUNE MOUNTING BRACKETS

Mounting brackets with **ACTIVSTONE® coating** are engineered to resist the accumulation of weld spatter, reducing the need for frequent cleaning and maintenance. A dedicated range of **stainless-steel brackets** provides exceptional mechanical and chemical resistance, making them ideal for tough industrial environments.

The latest products include **C44 form factor brackets**, versions for a wide range of sensor sizes, as well as **short and long designs with adaptor functionality**. These adaptor-style brackets allow sensors from **M8–M30** to be inserted into housings with **M12 or M18 exteriors**, offering maximum flexibility without requiring sensor size changes to match mounting conditions. In addition, **cylindrical coated brackets** feature a built-in limit stop, ensuring simple sensor replacement without the need to readjust distances after installation.

		Part Reference	Material	Dimensions (mm)	Compatible with					
					Sensor Size				Classics 600 Series	Full Inox 700 Series
					M8	M12	M18	M30		
COATED WELD-IMMUNE MOUNTING BRACKETS		ASU-3141-120	Steel	L = 48.50 W = 19.40 H = 14.00	✓				✓	✓
		ASU-3041-120	Steel	L = 32.00 W = 19.40 H = 14.00	✓				✓	✓
		ASU-3041-180	Steel	L = 40.00 W = 24.00 H = 18.00		✓			✓	✓
		ASU-0061-300	Base: Steel Nose: Nylon	L = 67.60 W = 46.00 H = 40.00				✓	✓	✓
		ASU-0041-80	Steel	L = 35.00 W = 28.60 H = 12.70	✓				✓	✓
		ASU-0041-120	Steel	L = 38.1 W = 34.9 H = 19.05		✓			✓	✓
		ASU-0041-180	Steel	L = 38.1 W = 38.1 H = 25.4			✓		✓	✓
		ASU-0041-300	Steel	L = 44.45 W = 59.94 H = 38.1				✓	✓	✓
		ASU-0051-300	Stainless steel	L = 21 W = 60 H = 36.85				✓	✓	✓
		ASU-3052-080	Stainless steel	SW17 L = 32.4	✓					✓
		ASU-3052-120	Stainless steel	SW22 L = 33.8		✓				✓
		ASU-3052-180	Stainless steel	SW30 L = 33.8			✓			✓

ACCESSORIES OVERVIEW

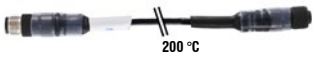
HIGHEST PROTECTION IN WELDING APPLICATIONS

- Direct retrofit for existing mounts
- Faceted face for closer part placement
- Superior clamping force
- Absorbs impacts for enhanced sensor protection
- Greater resistance to spatter adhesion
- Cutaway channel to view sensor LED

ACCESSORIES OVERVIEW

WELD-IMMUNE CABLES

Sensor cables are protected with a range specifically developed for **Weld-Immune environments.** For standard applications, **Weld-Immune Standard Cables** provide reliable protection against spatter. For extremely harsh conditions involving intense heat and spatter, **Harsh Environment Weld-Immune Cables** are available: one version withstands temperatures up to **200°C**, while another, reinforced with a protective tube, that resists up to **260°C**—delivering the highest level of protection.

		Part Reference	Socket			Cable	
			Size	Pins	Config.	Material	Length
HARSH WELD-IMMUNE CABLES	Super Grade Cables						
		S12-5FFG-XXX-NPWN-12MG	M12	5	straight	FPE + PTFE	0.6, 1, 2, 5 & 10 m
		S12-5FFW-XXX-NPWN-12MG	M12	5	right angle	FPE + PTFE	0.6, 1, 2, 5 & 10 m
	Alpha Grade Cables						
		S12-5FFG-XXX-NBWN-12MG	M12	5	straight	FPE	0.6, 1, 2, 5 & 10 m
		S12-5FFW-XXX-NBWN-12MG	M12	5	right angle	FPE	0.6, 1, 2, 5 & 10 m
STANDARD WELD-IMMUNE CABLES		S12-3FUG-020-NNWN	M12	3	straight	PUR	2 m
		S12-3FUG-050-NNWN	M12	3	straight	PUR	5 m
		S12-3FUW-020-NNWN	M12	3	right angle	PUR	2 m
		S12-3FUW-050-NNWN	M12	3	right angle	PUR	5 m
		S12-3FUG-020-NNWN-12MG	M12	3	straight	PUR	2 m + M12 plug
		S12-3FUG-050-NNWN-12MG	M12	3	straight	PUR	5 m + M12 plug

ACCESSORIES OVERVIEW

WELD-IMMUNE PROTECTIVE TUBES AND MOUNTING TOOLS

A wide range of protective tube diameters is available to fit the most common cable sizes. Larger tubes can even accommodate multiple cables within a single protective sleeve. Thanks to a built-in slit, cables can be inserted quickly and easily—without the need to disconnect them. For even greater convenience, mounting tools are available to guide cables smoothly into the protective tubes.

		Part Reference	Material	Inner Diameter	Outer Diameter	Length
WELD-IMMUNE PROTECTIVE TUBES		**APT-0000-XXX**	PTFE	3.5 mm	6 mm	1 m/10/100 m
		APT-0004-XXX	PTFE	5 mm	8.8 mm	1 m/10/100 m
		APT-0001-XXX	PTFE	6.5 mm	10 mm	1m/10/100 m
		APT-0005-XXX	PTFE	8 mm	12.2 mm	1 m/10/100 m
		APT-0015-XXX	PTFE	8 mm	12.2 mm	1 m/10/100 m
		APT-0002-XXX	PTFE	13 mm	17.5 mm	10 m/100 m
		APT-0003-XXX	PTFE	19 mm	23.5 mm	1/10 m/100 m
		ALL PROTECTIVE TUBES FEATURE A PRE-EXISTING SLIT FOR EASY CABLE INSERTION				

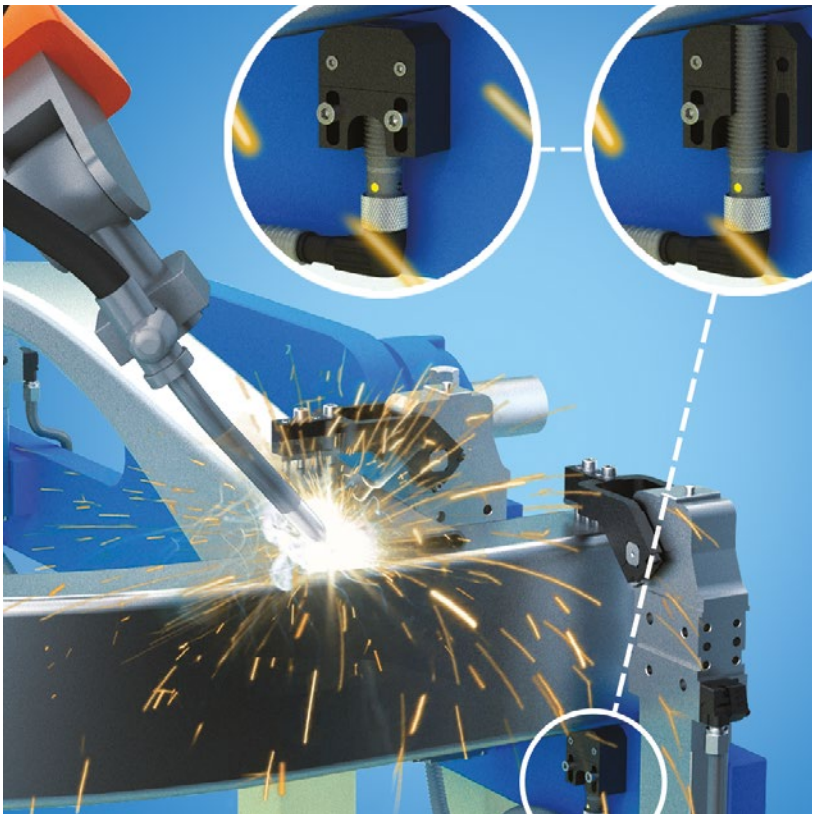
		Part Reference	Compatible With
WELD-IMMUNE MOUNTING TOOLS		**APT-1001-000**	APT-0001-XXX APT-0005-XXX APT-0015-XXX
		APT-1003-000	APT-0002-XXX/APT-0003-XXX

APPLICATIONS

AUTOMOTIVE CHASSIS-WELDING LINES

Spatter-resistant Weld-Immune sensors deliver exceptional reliability and extended service life on automotive chassis-welding lines

Automated chassis welding in the automotive sector requires synchronized operation of multiple robots, in complete safety and with minimal human intervention. A misaligned assembly results in damage to the workpiece and potentially one or more robots, but position sensors typically suffer from build-up of welding spatter, causing rapid sensor degradation. Contrinex Weld-Immune inductive sensors with a high-performance ceramic coating are especially resistant to weld spatter and provide a robust, low-maintenance sensing solution with a best-in-class service life.



CUSTOMER BENEFITS

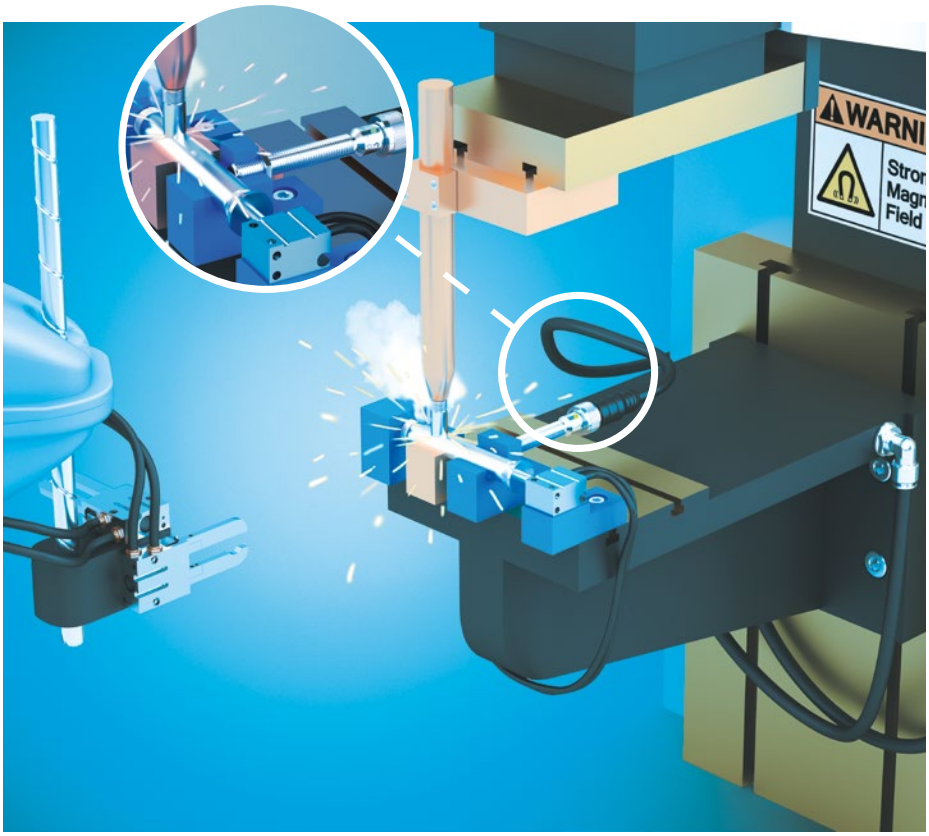
- Rugged inductive sensors ensure accurate positioning of assemblies and components, eliminating welding rejects and equipment damage
- High-performance ACTIVSTONE® ceramic coating prevents spatter accumulation and inhibits sensor-performance degradation
- Extended service life as ACTIVSTONE® withstands frequent and aggressive cleaning regimes
- Weld-Immune sensors provide immunity to electromagnetic interference, in particular from medium-frequency weld fields
- Industry-standard IO-Link connectivity provides a single interface to the machine control system
- Proven technology ensures highly reliable operation with extended service life and minimum down-time

APPLICATIONS

ALUMINUM ASSEMBLIES

Factor 1 Weld-Immune sensors offer outstanding protection at exceptional prices during mf resistance welding of aluminum assemblies

The strong magnetic fields generated by industrial spot welders cause unprotected sensors to malfunction or fail. To prevent misalignment during assembly, a valve manufacturer requires inductive proximity sensors that withstand the exceptionally high currents needed to weld aluminum parts. Contrinex S600 Weld-Immune inductive sensors are immune to electromagnetic interference and sense targets in steel and aluminum equally effectively. Highly reliable and robust, they provide a cost-effective solution with a best-in-class service life.



CUSTOMER BENEFITS

- Rugged inductive sensors ensure accurate positioning of aluminum components, eliminating assembly rejects and minimizing downtime
- Weld-Immune sensors provide immunity to electromagnetic interference from 50 Hz and medium-frequency weld fields
- Exceptionally high currents needed for welding aluminum do not inhibit accurate detection of targets
- Factor 1 sensors require no reduction in sensing distance for aluminum targets, reducing the chance of accidental collisions
- Proven technology ensures reliable operation with extended service life and minimal down-time
- Optional addition of high-performance

WHY CHOOSE US

- Technology leader for sensors and systems in the most challenging operating conditions
- Partner to the welding industry for over 20 years
- Building industrial experience since 1972
- Widest IO-Link portfolio – ready for Industry 4.0 since 2009
- Most reliable sensors on the market with best temperature compensation and highest quality materials
- Technical mastery of key elements – with our own ASIC development
- Global sales network with solution-oriented application support
- Impeccable Swiss quality for our products and systems

WHAT WE OFFER

- 5 production sites for fast, worldwide availability
- 3 logistic hubs for rapid delivery – even for special products
- International Customer Services
- Long-standing experience in product customization and brand labelling
- Vigorous lab testing, pre-shipment inspections and compliance with international and market standards

KEY DATES

1999 Inductive sensors with world's most robust full-metal housing, thanks to Condet® technology

2013 Contrinex suppression-circuit technology for inductive sensors in welding applications

2019 Weld-spatter-resistant coating for sensors and accessories

Terms of delivery and right to change design reserved.

HEADQUARTERS

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