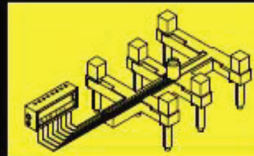


AIRTECT



Plastic Leak Alarm System

**DETECT YOUR NOZZLE AND
HOT RUNNER LEAKS EARLY!**

A SOLUTION FOR:

HMP

H mecánica de precisión

DESIGNED AND MANUFACTURED BY:

G.K.E Ltd t/a KENEX, E5 Swords Enterprise Park, Feltrim Road, Swords, Co. Dublin IRELAND Tel: +353 87 2996101

info@airtect.com www.airtect.com

WHAT IS AIRTECT?

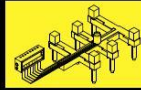
THE AIRTECT PLASTIC LEAK ALARM SYSTEM IS A UNIQUE DEVICE WHICH ASSISTS IN PREVENTING DAMAGE CAUSED BY LEAKING MOLTEN PLASTIC MATERIAL AT THE MAIN INJECTION NOZZLE OF INJECTION MOULDING MACHINES AND ALSO WITHIN HOT RUNNER MOULDS.

IT IS BEING USED WORLDWIDE BY MANY WELL KNOWN COMPANIES SUCH AS IAC, VALEO, MAGNA, BD, HELLA, POLYPIPE... TO NAME BUT A FEW.

AIRTECT PRODUCTS ARE REPRESENTED WORLDWIDE BY A NETWORK OF DISTRIBUTORS.



AIRTECT



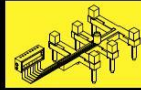
Plastic Leak Alarm System

WHY USE AIRTECT?

Because of an industry wide problem.....Leaks of molten Plastic Material at the Main Injection Nozzle and within Hot Runner Moulds:



AIRTECT

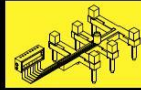


Plastic Leak Alarm System

BECAUSE OF THIS!

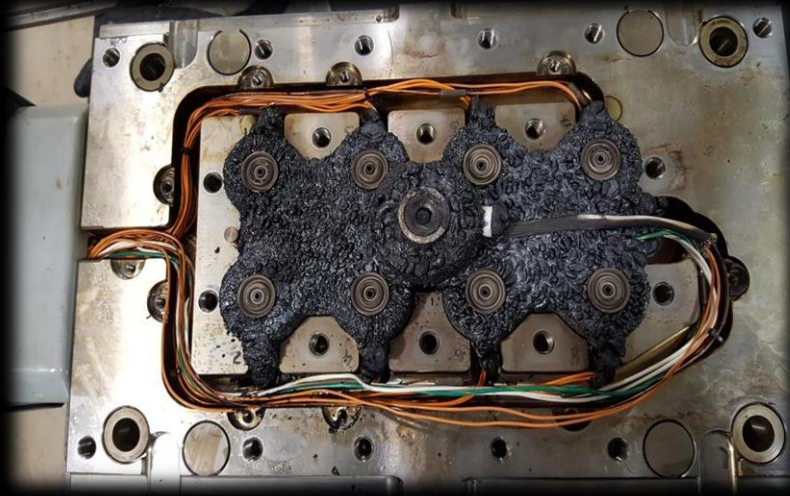


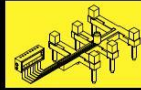
AIRTECT



Plastic Leak Alarm System

AND THIS.....!



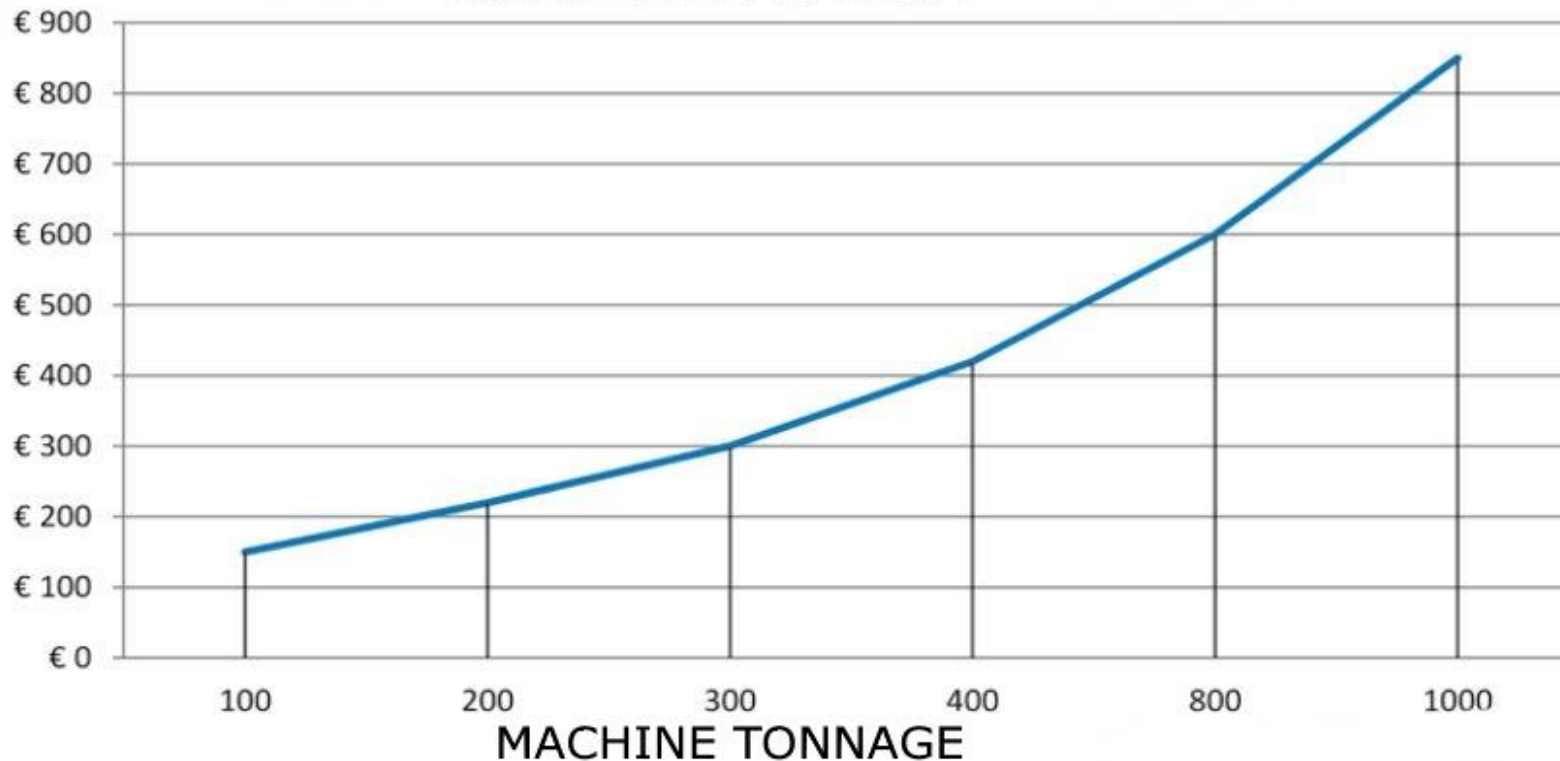


WHAT ARE THE COSTS OF NOZZLE LEAKS?

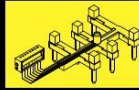
The tangible costs include replacement heater bands and thermocouples, maintenance labour and machine downtime.

(intangible costs can be reputational damage due to late deliveries and health and safety issues)

NOZZLE LEAK COST



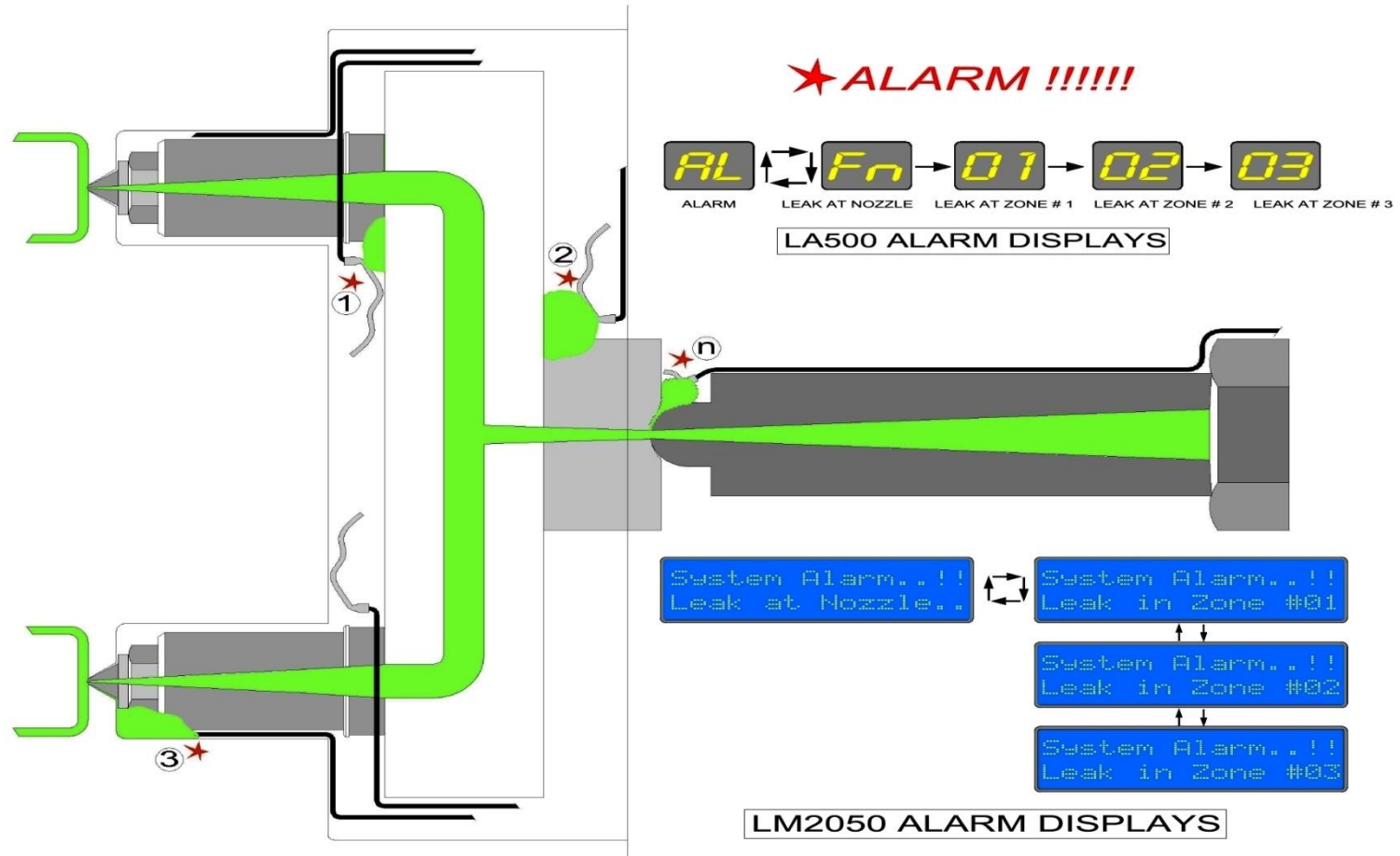
AIRTECT



Plastic Leak Alarm System

**DETECT YOUR NOZZLE AND HOT
RUNNER LEAKS EARLY!! ☺**

PRINCIPLE OF OPERATION.....

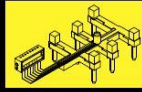


Control/Display Units

4, 8 and 16-Zone Manifolds + Stand-Alone Manifolds



AIRTECT



Plastic Leak Alarm System

**IS THERE ANY
SOLUTION? TRY THESE ☺**

**A PROVEN EFFECTIVE SOLUTION TO REDUCE THE DAMAGE
AND COST OF THESE LEAKS.....**

LA500



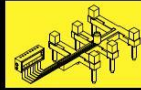
LM2050



BENEFITS:

- Nozzle and Barrel Protection ☺
- Significantly Reduced Budget for Maintenance Items ☺
- Increased Health and Safety ☺
- Reduced Downtime ☺
- Peace of Mind for Unattended Machines ☺

AIRTECT



Plastic Leak Alarm System

LA500

Functions as an Injection Nozzle Leak Alarm + Display and Control Unit and can be connected to Multi-Zone Manifold Units for Hot Runner Leak Detection.

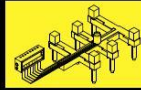


INJECTION NOZZLE PLASTIC LEAK ALARM (AND CONTROL UNIT FOR LA508/516 MANIFOLD)

Kit Includes:

- LA500 with 2 x 7-segment LED display with programmable operational settings
- AR-20GF Air Pressure Regulator with Pressure Gauge, Air Filter and Fittings
- 3 Meters PU Tube
- 0.5 Metres 2.5mm Silicone Rubber Tube
- 3 Meters 2mm Stainless Steel Sensor Tube
- Installation/Operation Manual
- 2 Meter Electrical Power/Interlock Cable

AIRTECT



Plastic Leak Alarm System

LM2050

Functions as an Injection Nozzle Leak Alarm + Display and Control Unit and can be connected to Multi-Zone Manifold Units for Hot Runner Leak Detection.



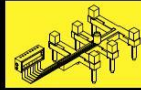
INJECTION NOZZLE PLASTIC LEAK ALARM (AND CONTROL UNIT FOR LA508/516 MANIFOLD)

Kit Includes:

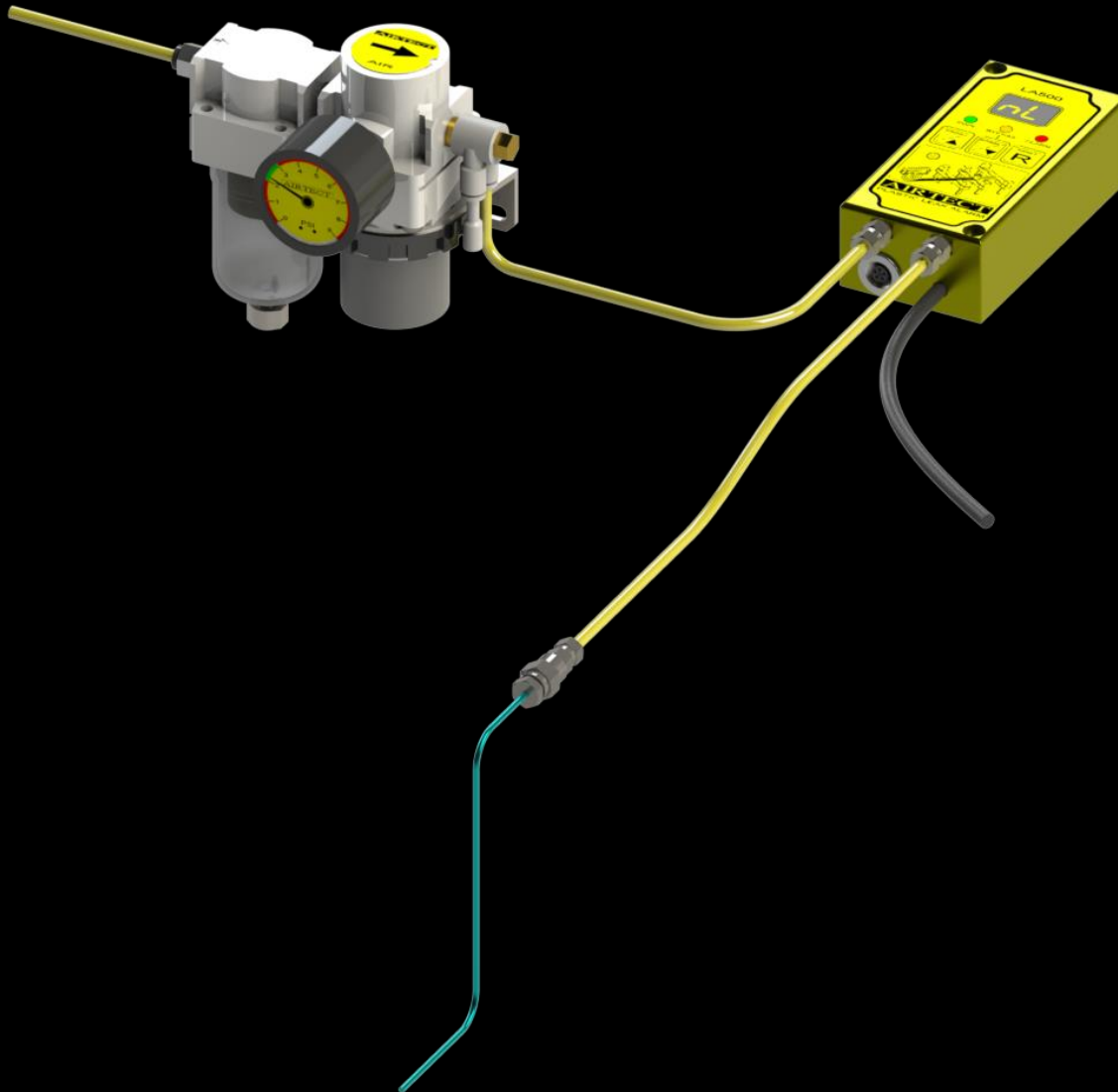
- LM2050 with Clear Text LCD display with programmable operational settings
- AR-20GF Air Pressure Regulator with Pressure Gauge, Air Filter and Fittings
- 3 Meters PU Tube
- 0.5 Metres 2.5mm Silicone Rubber Tube
- 3 Meters 2mm Stainless Steel Sensor Tube
- Installation/Operation Manual
- 3 Meter Electrical Power/Interlock Cable

AIRTECT

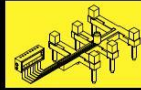
Plastic Leak Alarm System



LA500 INSTALLATION
(for nozzle only leak detection)

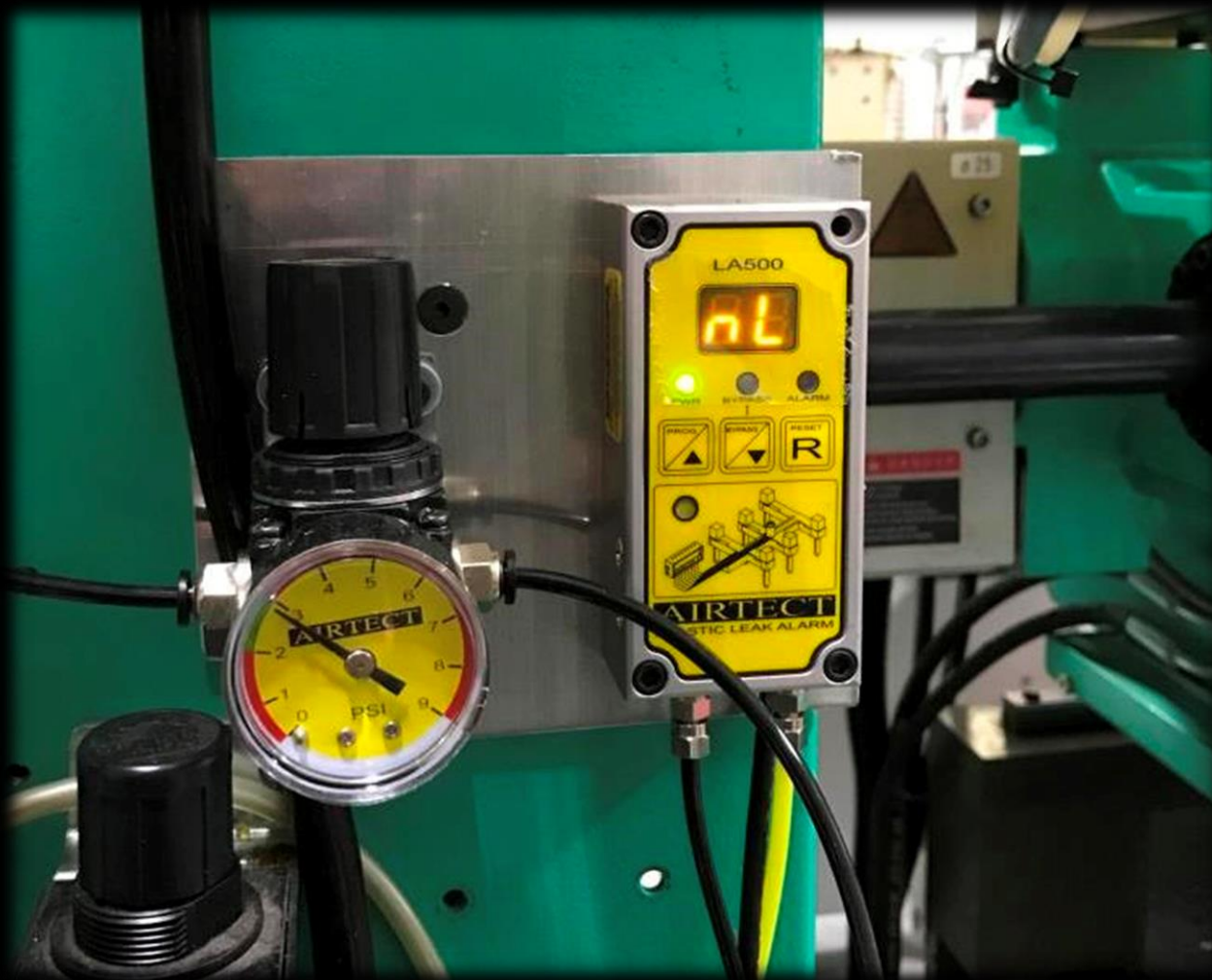


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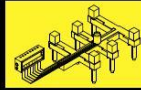


Plastic Leak Alarm System

LA500 PRACTICAL INSTALLATION
(for nozzle only leak detection)

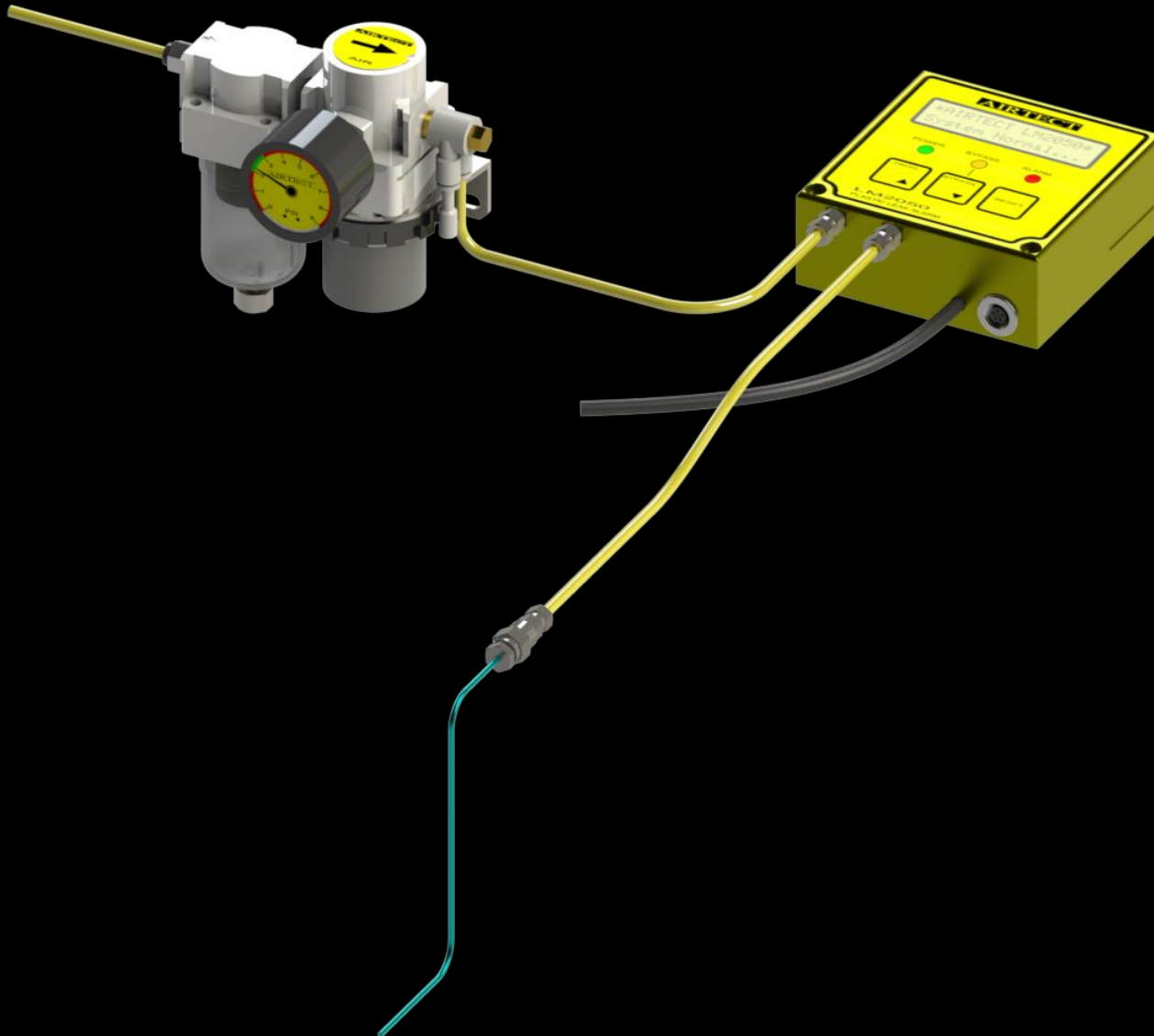


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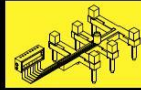
Plastic Leak Alarm System

LM2050 INSTALLATION
(for nozzle only leak detection)

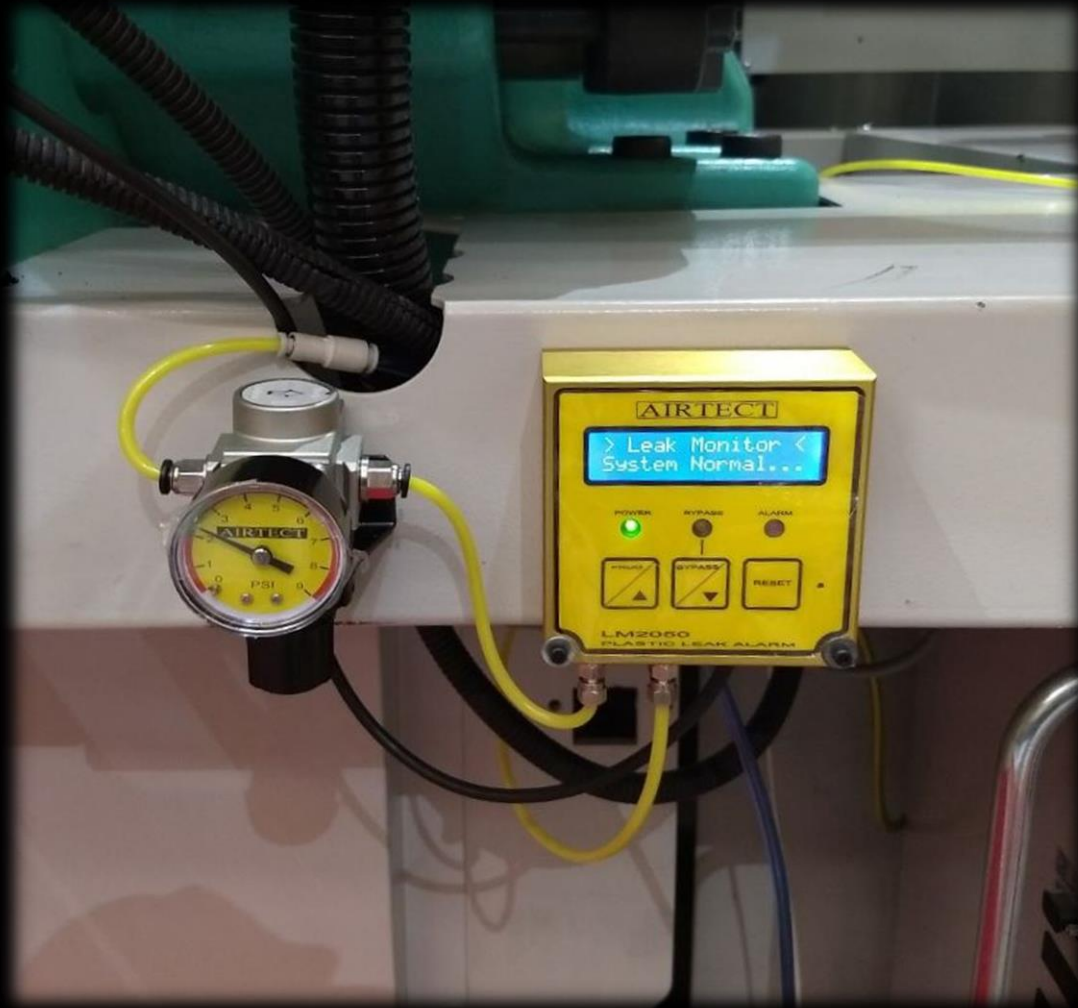


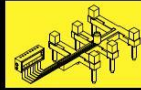
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Plastic Leak Alarm System



LM2050 PRACTICAL INSTALLATION
(for nozzle only leak detection)

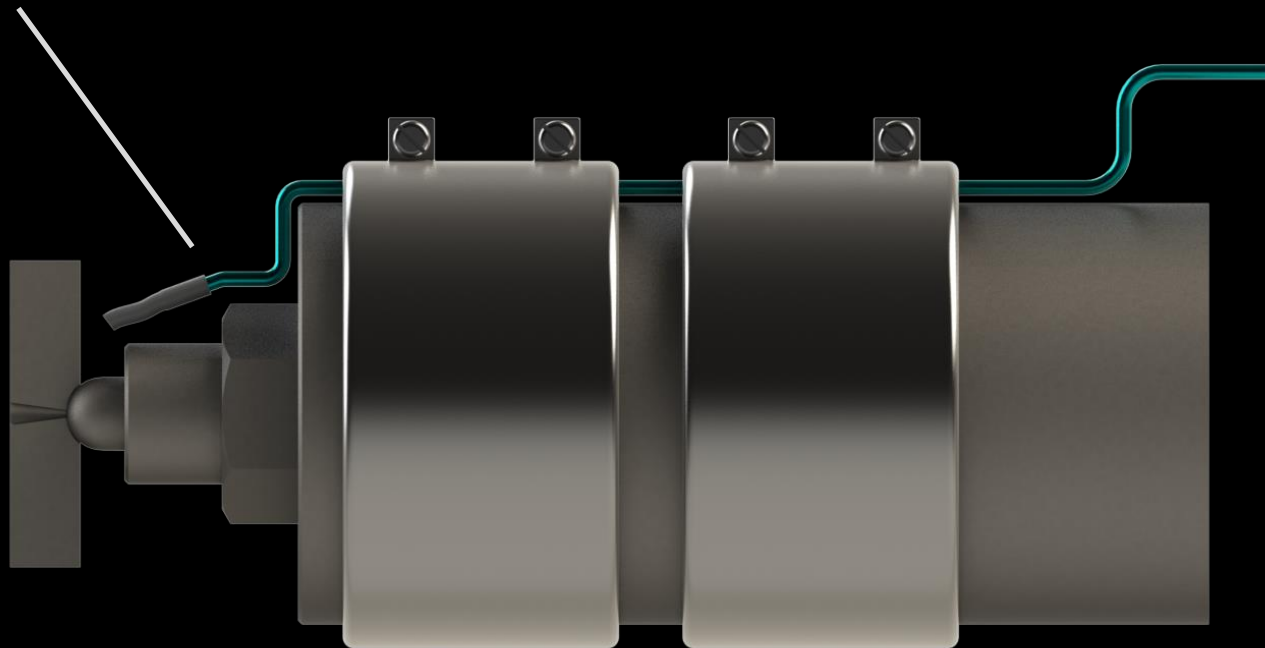
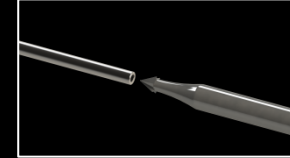
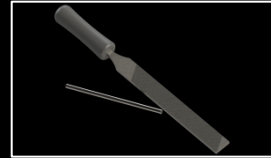
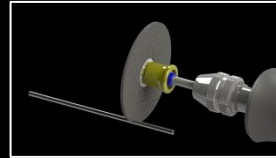


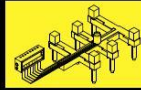


LM2050 and LA500 NOZZLE SENSOR TUBE INSTALLATION

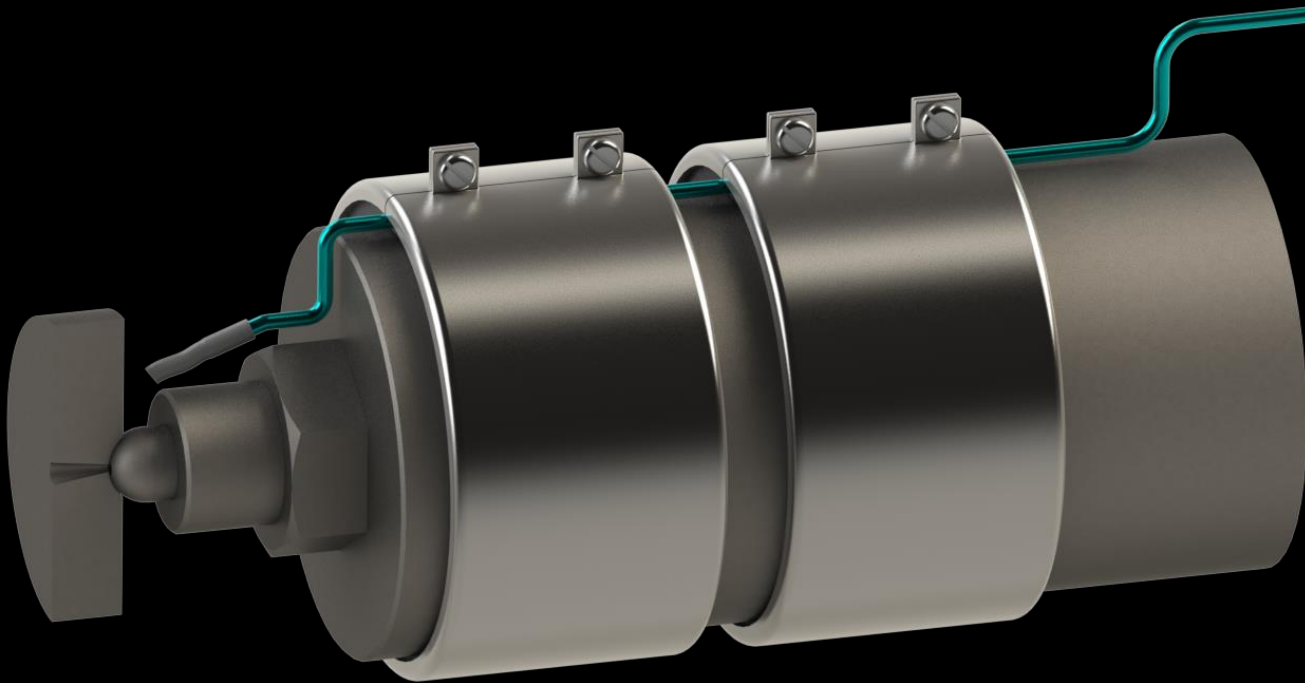
FULL CUTTING RECOMMENDATIONS SHOWN LATER

1. File Sensor Tube Flat
2. Ensure 1mm Clear Hole in Centre
3. Put on Silicone Rubber Sleeve
(leave 15-20mm overhang and keep away from direct contact with heater band or nozzle, max 270°C)
4. Place close to nozzle...customer can decide depending on how soon an indication they need.
5. Fix the Sensor Tube securely!



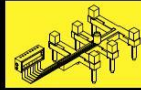


LM2050 and LA500 NOZZLE SENSOR TUBE INSTALLATION



AIRTECT

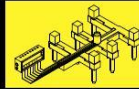
Plastic Leak Alarm System



LM2050 and LA500 PRACTICAL SENSOR TUBE INSTALLATION



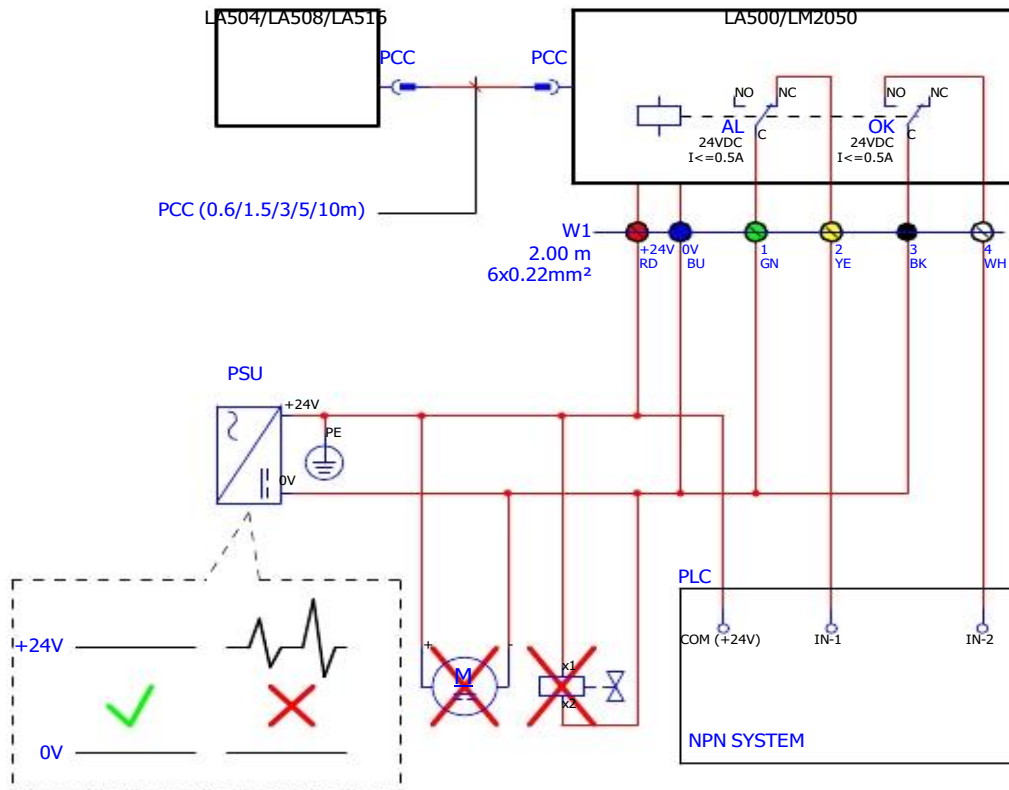
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Plastic Leak Alarm System

LM2050, and LA500 ELECTRICAL INSTALLATION (single nozzle and multi-zone)

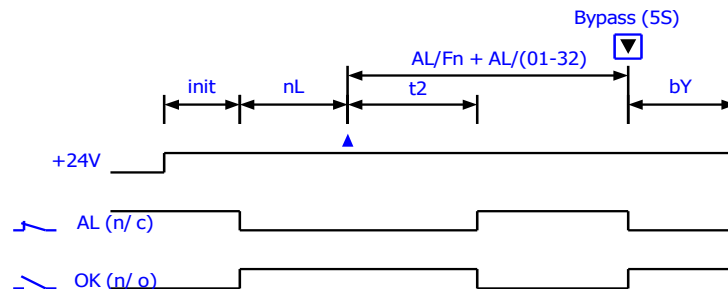
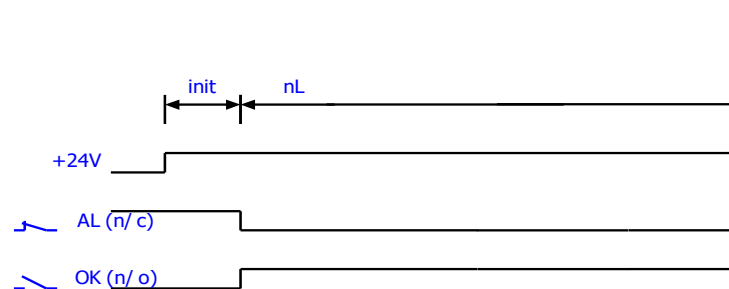
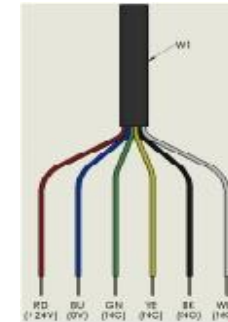
NPN SYSTEM



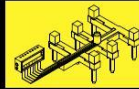
LA500



LM2050



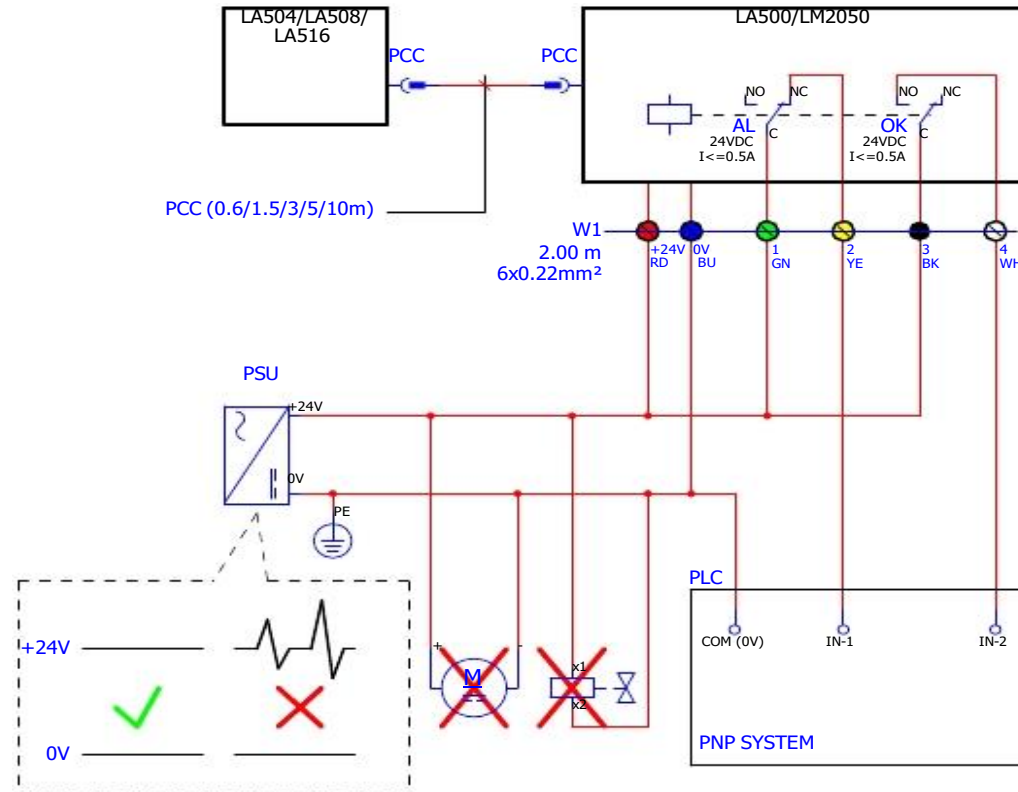
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Plastic Leak Alarm System

LM2050, and LA500 ELECTRICAL INSTALLATION (single nozzle and multi-zone)

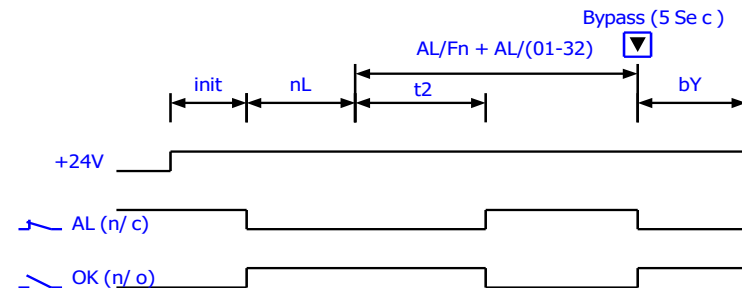
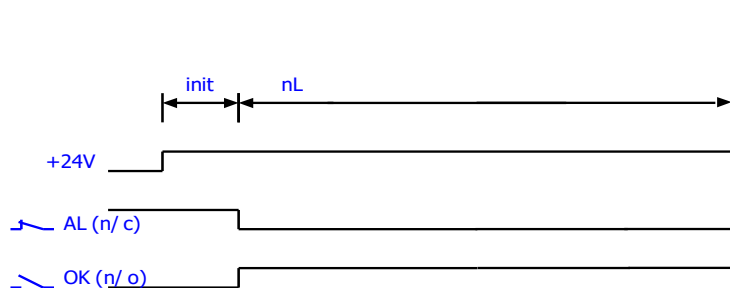
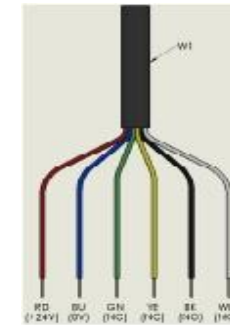
PNP SYSTEM



LA500



LM2050

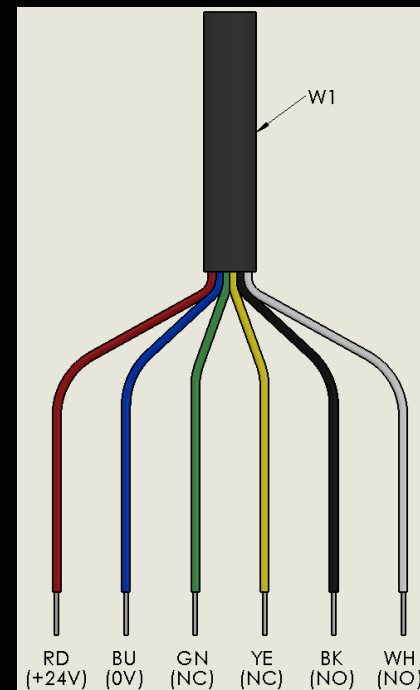
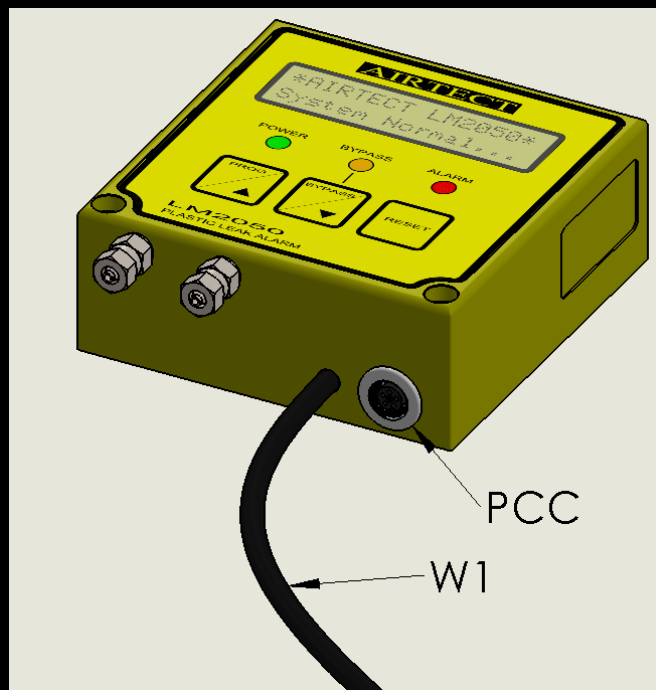
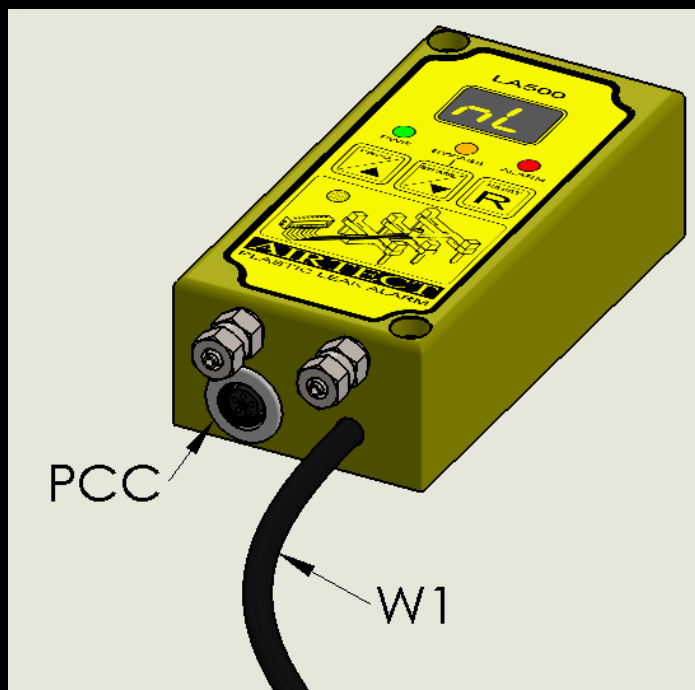


AIRTECT



Plastic Leak Alarm System

LM2050, and LA500
ELECTRICAL INSTALLATION
(single nozzle and multi-zone)

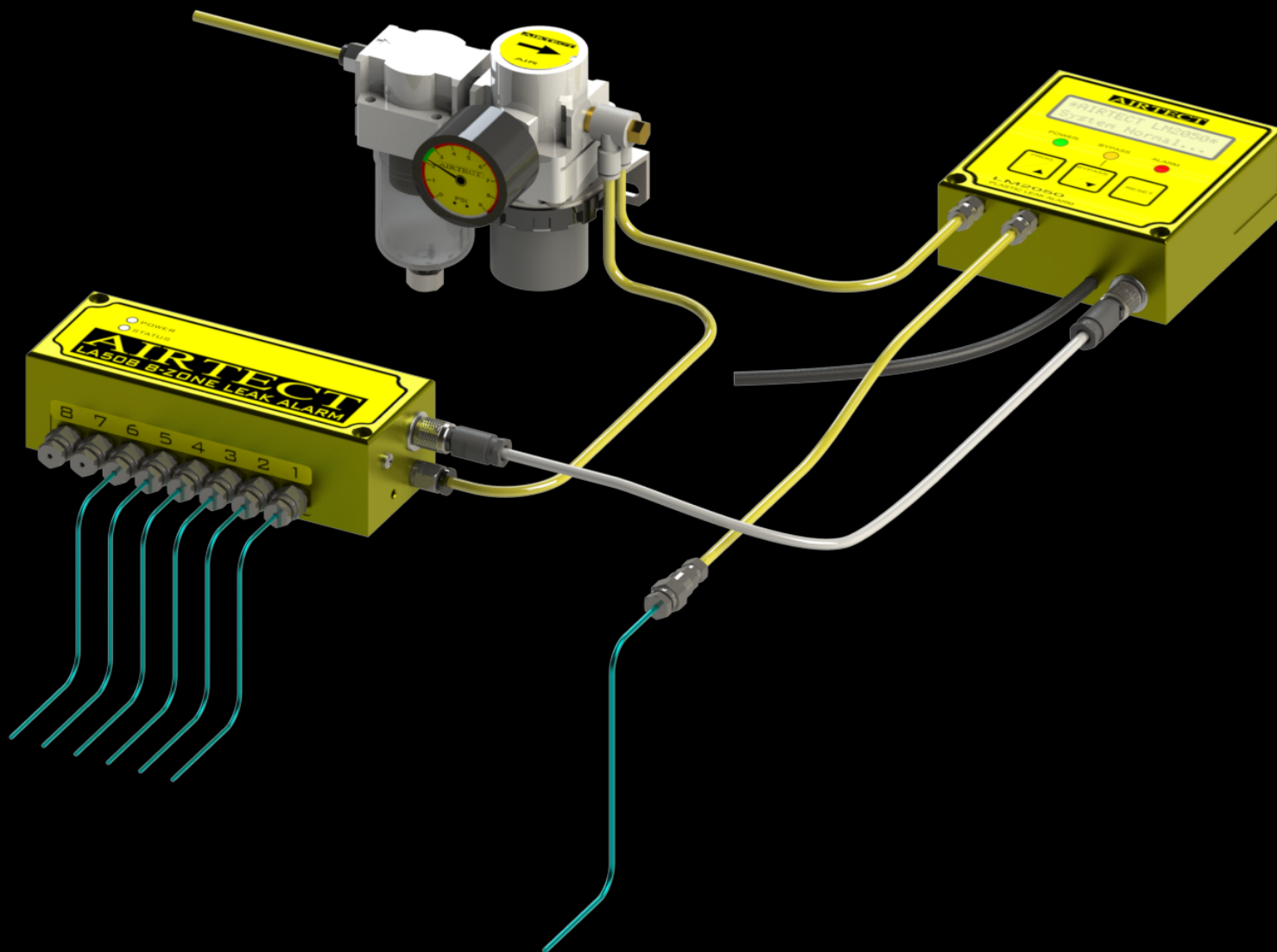


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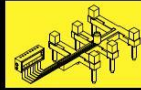


Plastic Leak Alarm System

LM2050 INSTALLATION (single nozzle and 8-zone leak detection)



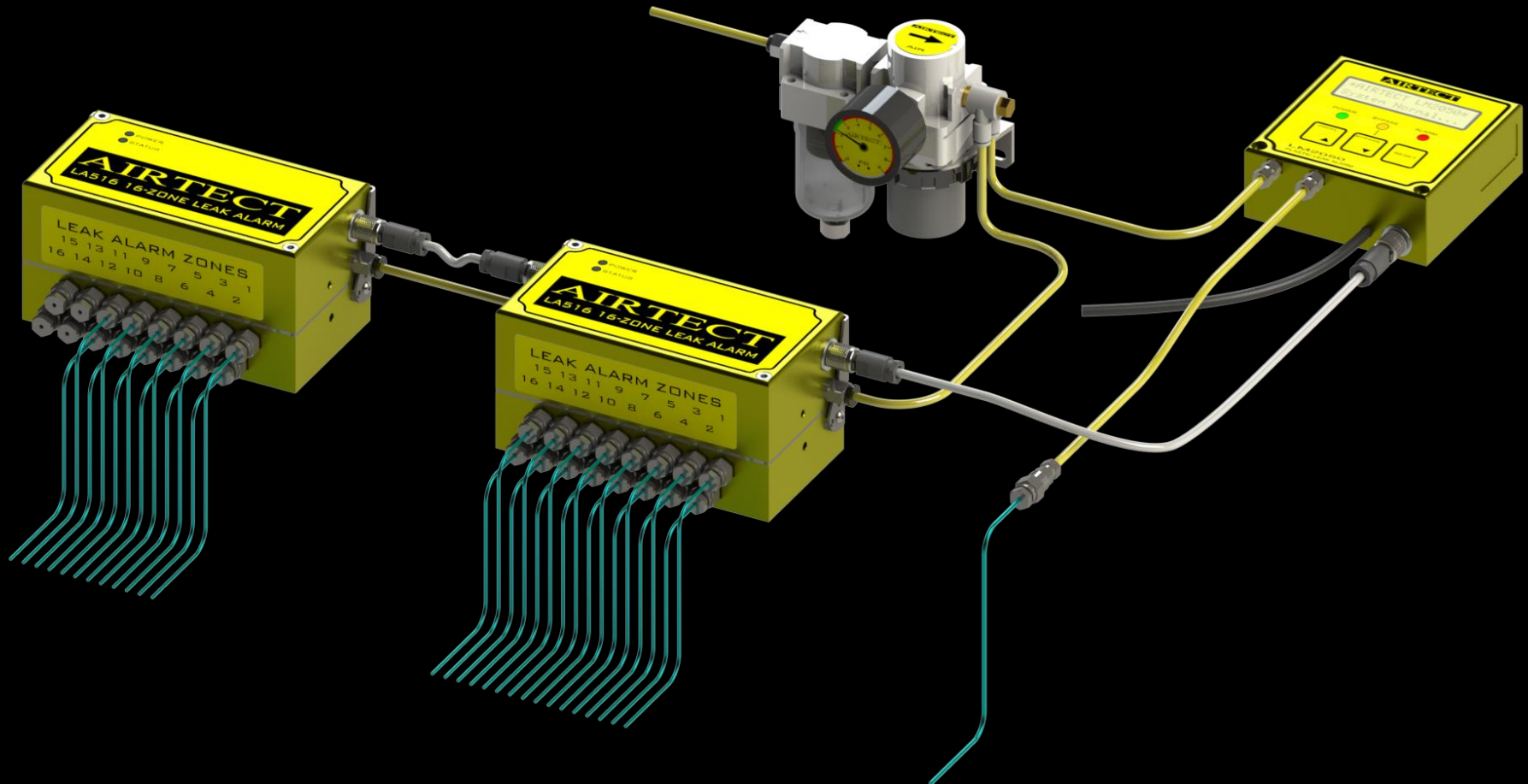
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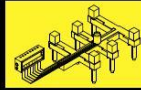
Plastic Leak Alarm System

LM2050 INSTALLATION

(single nozzle and 32-zone leak detection)



AIRTECT

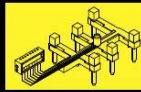


Plastic Leak Alarm System

LM2050 PRACTICAL INSTALLATION
(single nozzle and multi-zone leak detection)



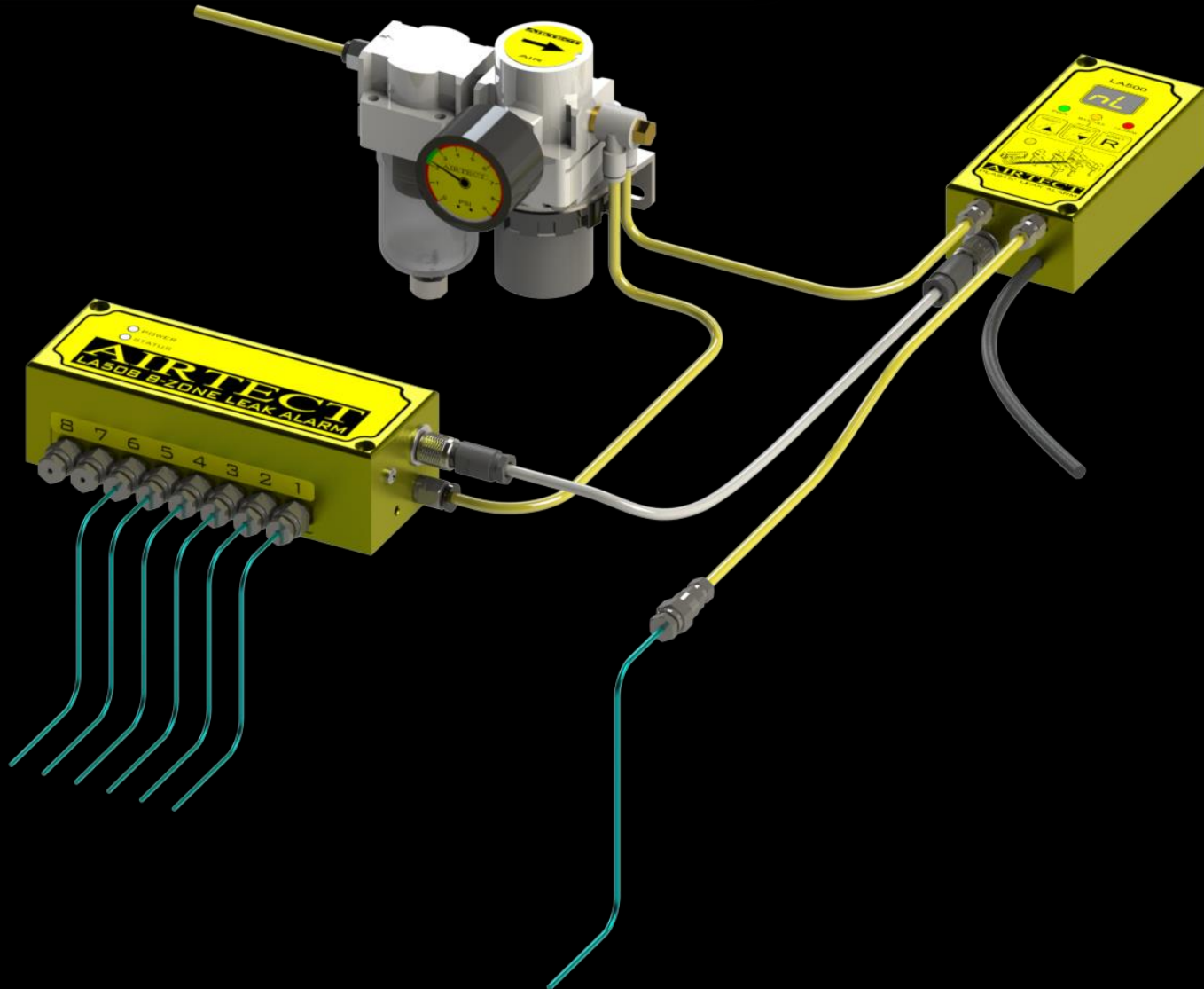
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Plastic Leak Alarm System

LA500 INSTALLATION

(single nozzle and 8-zone leak detection)



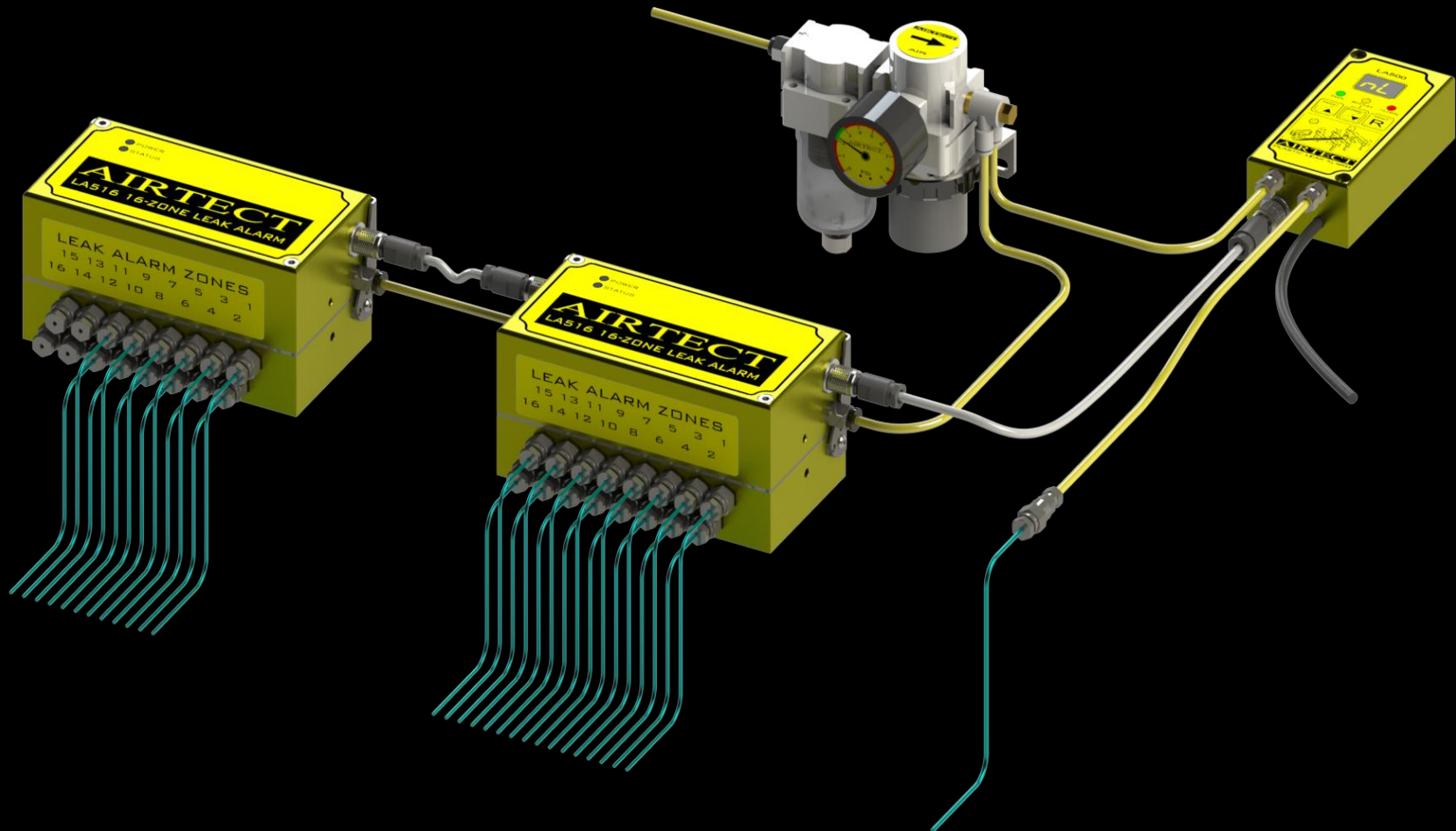
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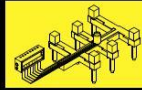


Plastic Leak Alarm System

LA500 INSTALLATION

(single nozzle and 32-zone leak detection)









INSTALLATION GUIDELINES:

1. The DC Power Source must be interference free. This means no Electromagnetic Interference (EMI) caused by solenoids and servomotors etc.
2. The internal interlock relay contacts have a capacity to switch loads of 24Vdc at a maximum current of 0.5A.
3. Ensure neat workmanship and run the wiring and plastic tubing within the machine enclosure where possible.
4. Ensure that both ends of all sensor tubes are cut neatly so as to provide a clear inner sensor tube diameter of 0.8mm (for 1.6mm tube) and 1mm (for 2mm tube).
5. When using expansion manifolds (LA504, LA508 etc) ensure the LA500 or LM2050 has been programmed to accept the manifold/s and that it/they are connected, otherwise a communication alarm will be displayed and vice-versa if the LA500 or LM2050 has not been programmed and a manifold is connected, a communication alarm will be displayed.
6. Electrical power should only be switched on **AFTER** the sensor tube installation is complete and the air supply is energised to allow the 'self teaching' function to work.
7. When using Modular systems, the manifolds must be mounted on the manifold base before applying electrical power as all mould leak sensor installations will be somewhat different.

MANIFOLD LED INDICATIONS

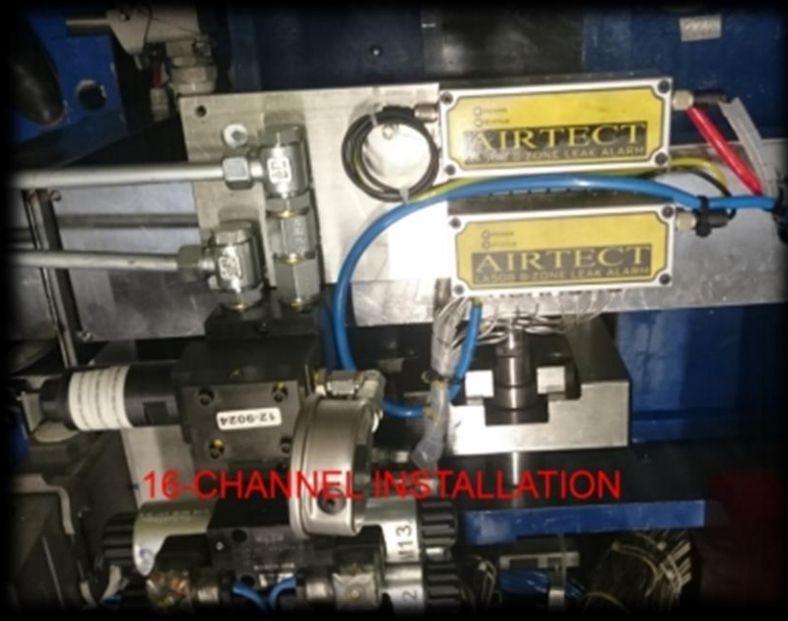
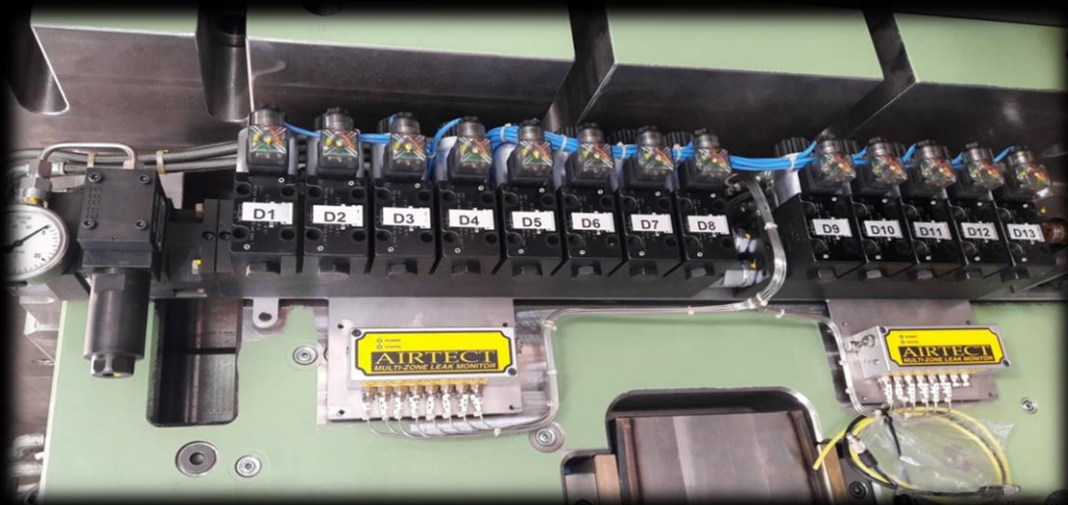
-  POWER LED SHOULD BE CONTINUOUSLY LIT (NORMAL)
-  STATUS LED SHOULD FLASK EVERY 3-4 SECONDS (NORMAL)
-  STATUS LED WILL FLASH QUICKLY FOR COMMUNICATION 'DATA ERROR' WARNING
-  STATUS LED WILL FLASH RED / GREEN QUICKLY FOR 'INTERNAL SENSOR ERROR' WARNING

AIRTECT



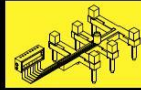
Plastic Leak Alarm System

MANIFOLD INSTALLATION PHOTOS



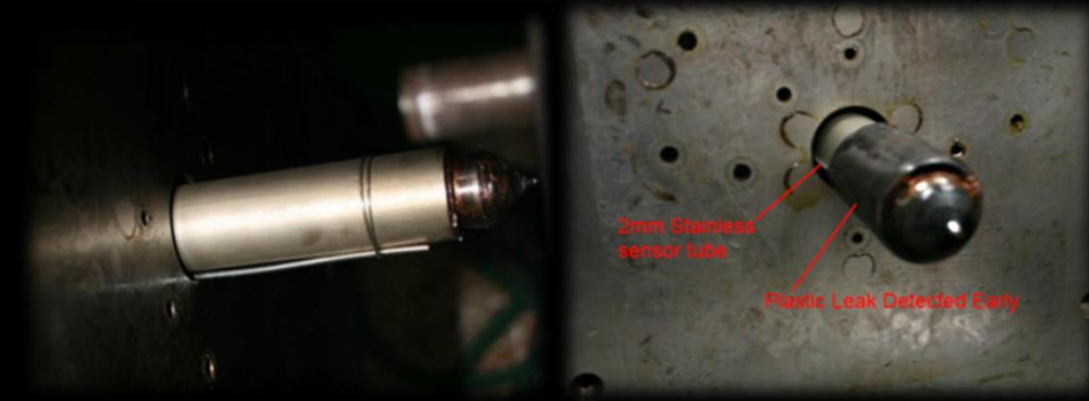
16-CHANNEL INSTALLATION

AIRTECT

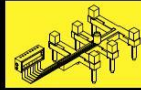


Plastic Leak Alarm System

SENSOR TUBE INSTALLATION PHOTOS



AIRTECT



Plastic Leak Alarm System

SENSOR TUBE INSTALLATION PHOTOS

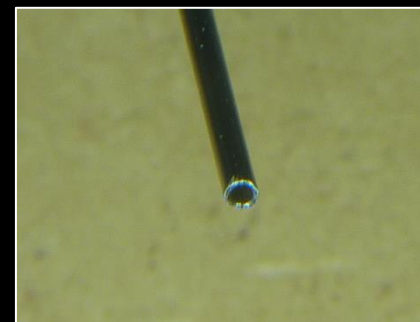
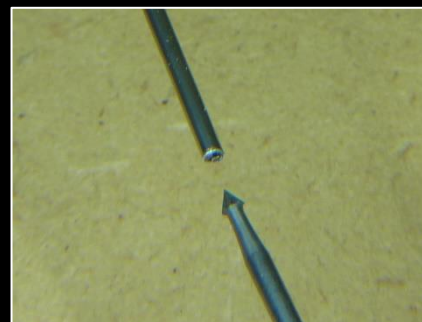
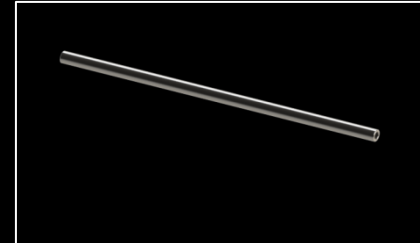
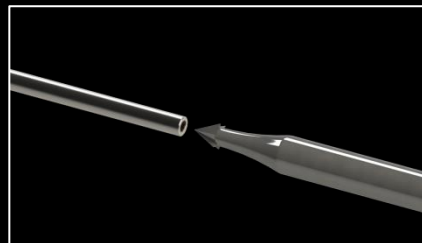
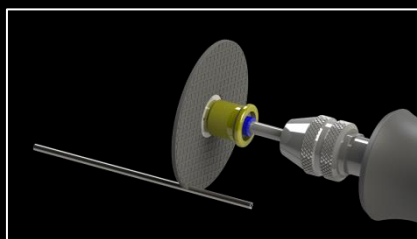
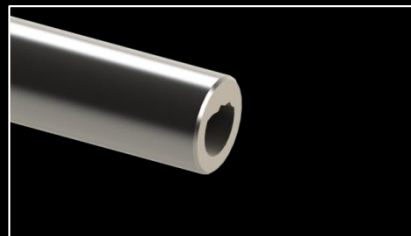
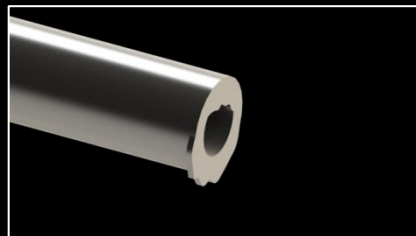


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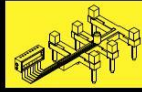


Plastic Leak Alarm System

SENSOR TUBE CUTTING RECOMMENDATIONS

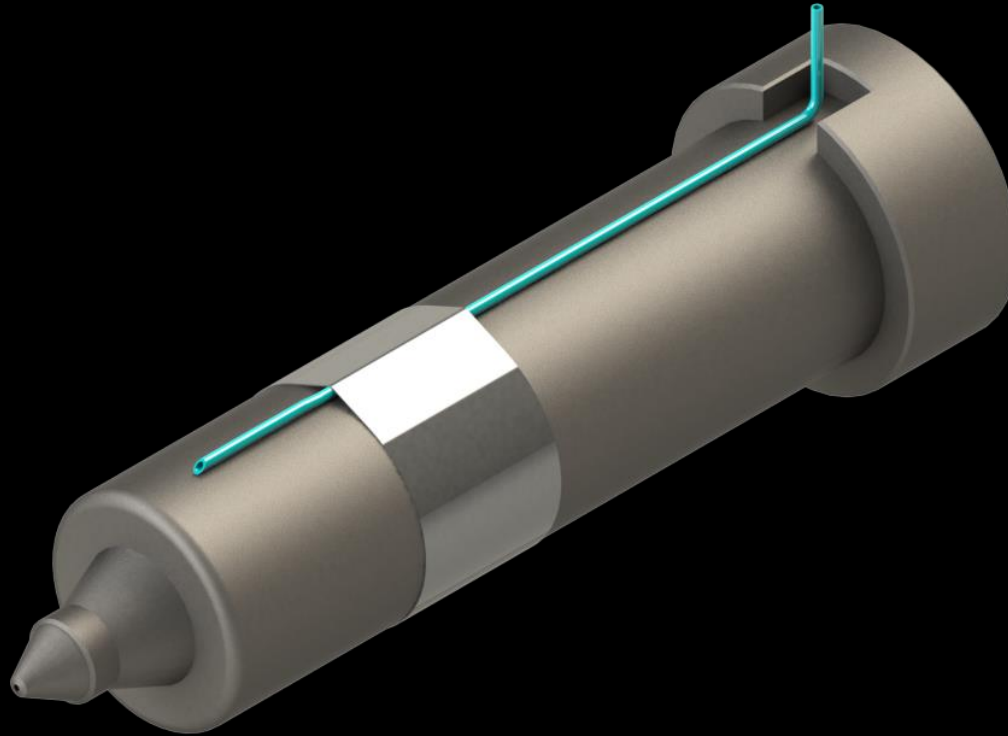


AIRTECT



Plastic Leak Alarm System

SENSOR TUBE INSTALLATION RECOMMENDATIONS

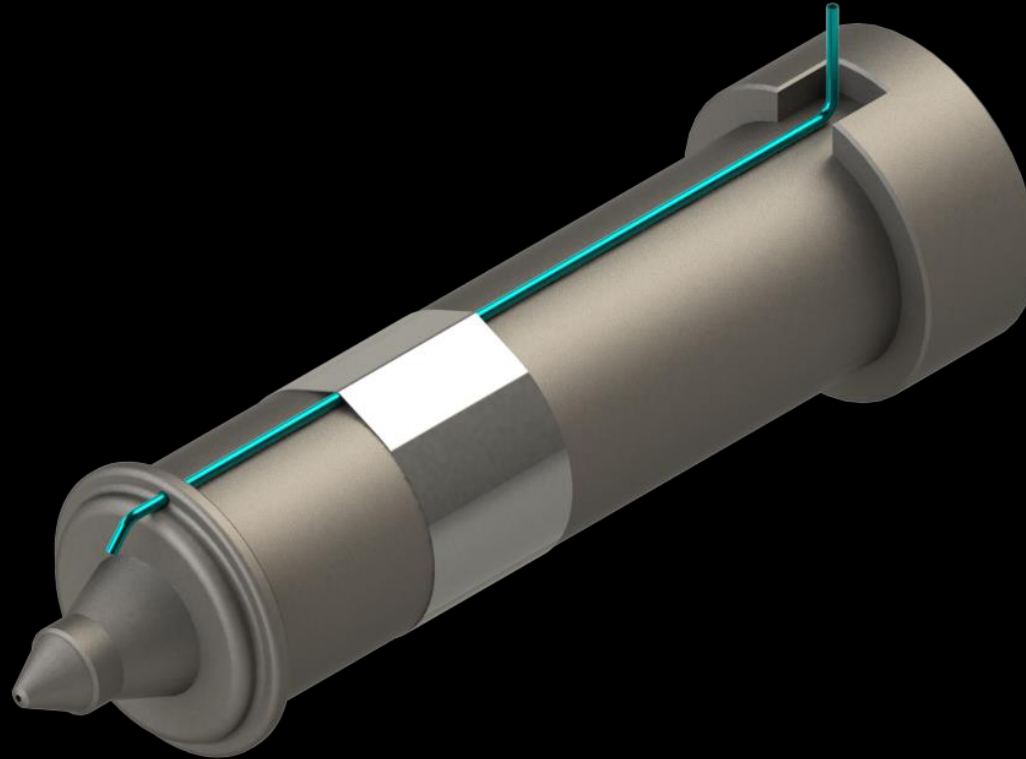


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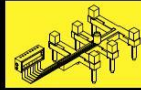
Plastic Leak Alarm System



SENSOR TUBE INSTALLATION RECOMMENDATIONS

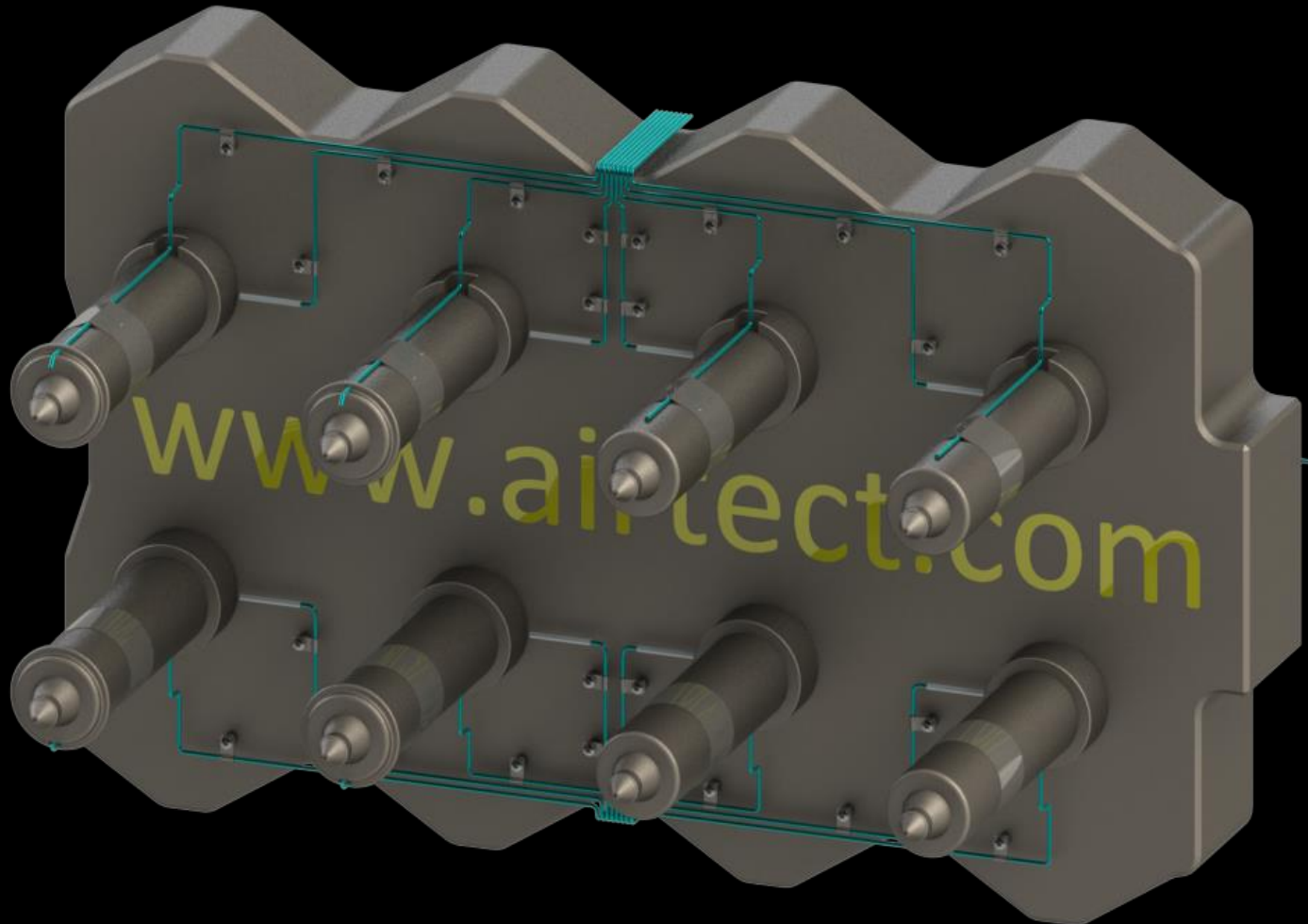


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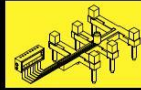


Plastic Leak Alarm System

**SENSOR TUBE INSTALLATION
RECOMMENDATIONS**

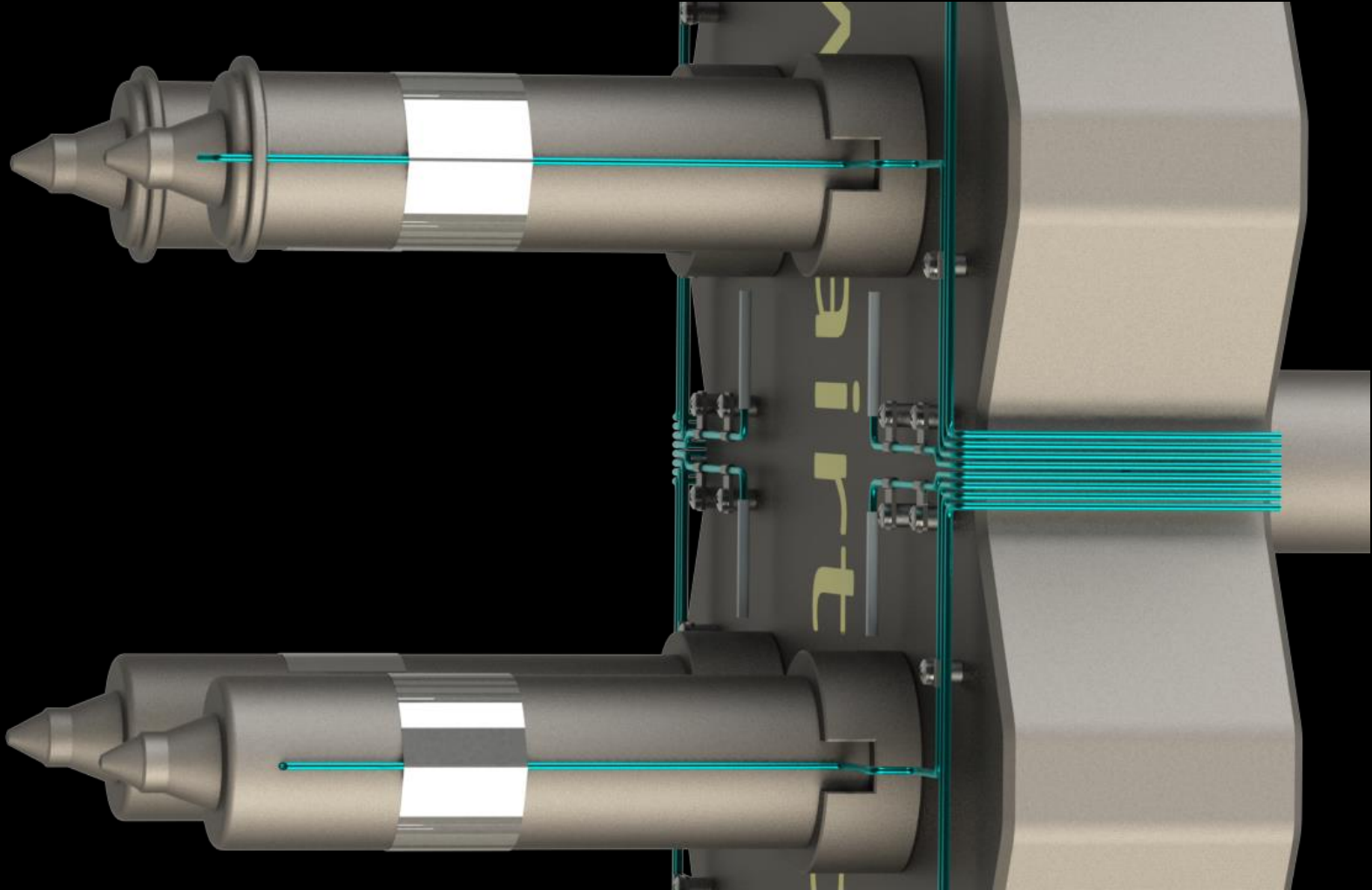


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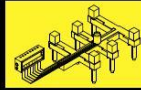


Plastic Leak Alarm System

SENSOR TUBE INSTALLATION RECOMMENDATIONS

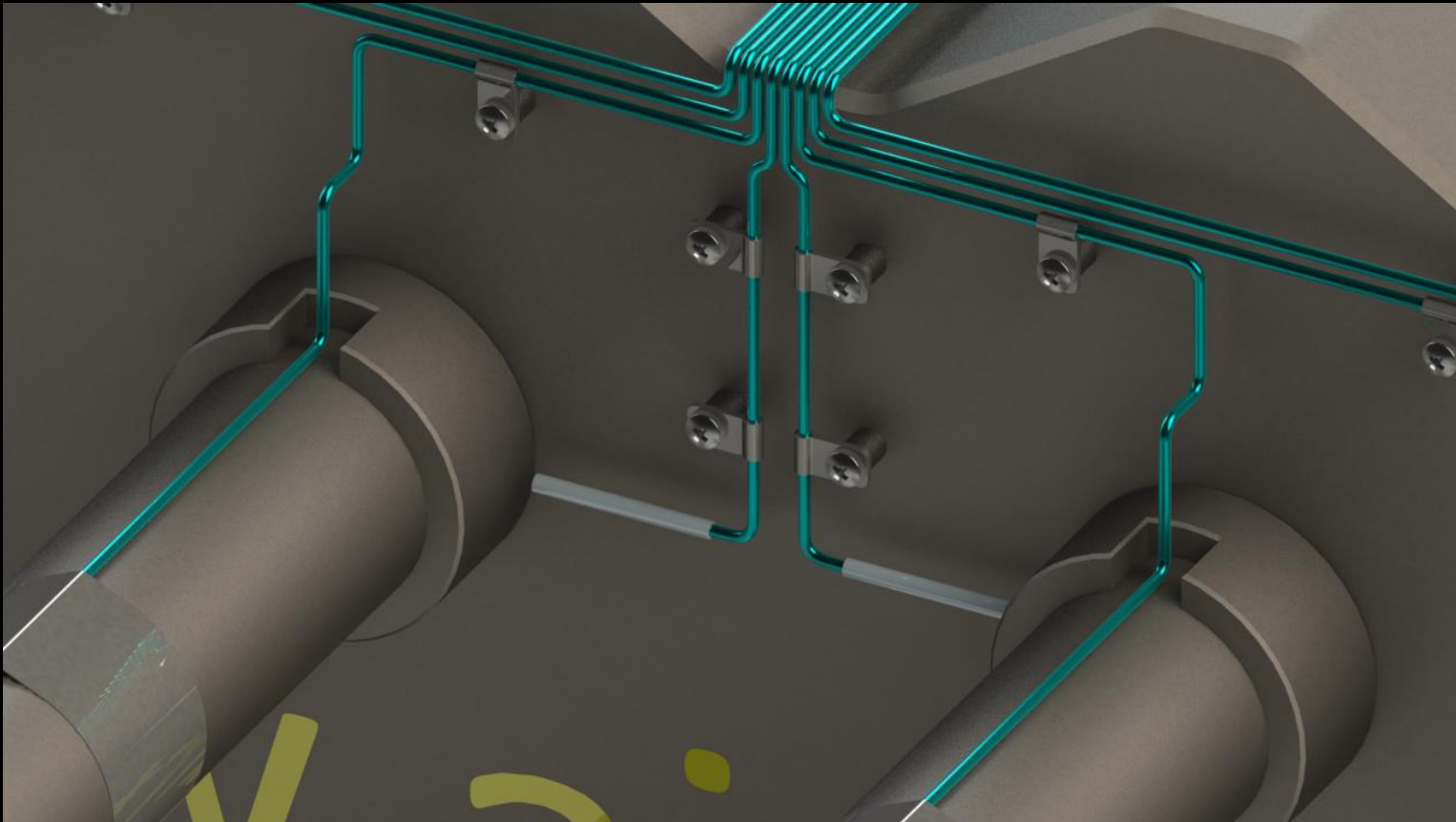


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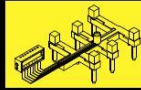


Plastic Leak Alarm System

SENSOR TUBE INSTALLATION RECOMMENDATIONS

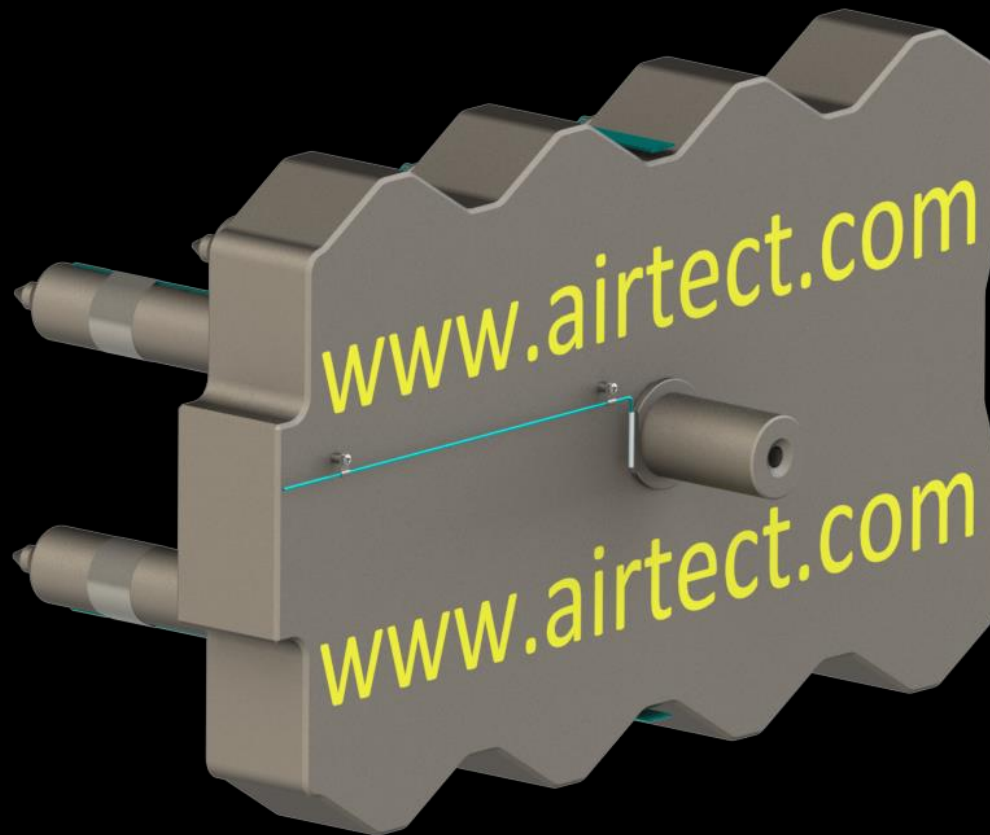


AIRTECT

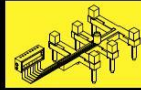


Plastic Leak Alarm System

**SENSOR TUBE INSTALLATION
RECOMMENDATIONS**



AIRTECT

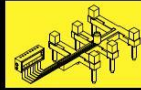


Plastic Leak Alarm System

**SENSOR TUBE INSTALLATION
RECOMMENDATIONS
'SERIES LINK'**

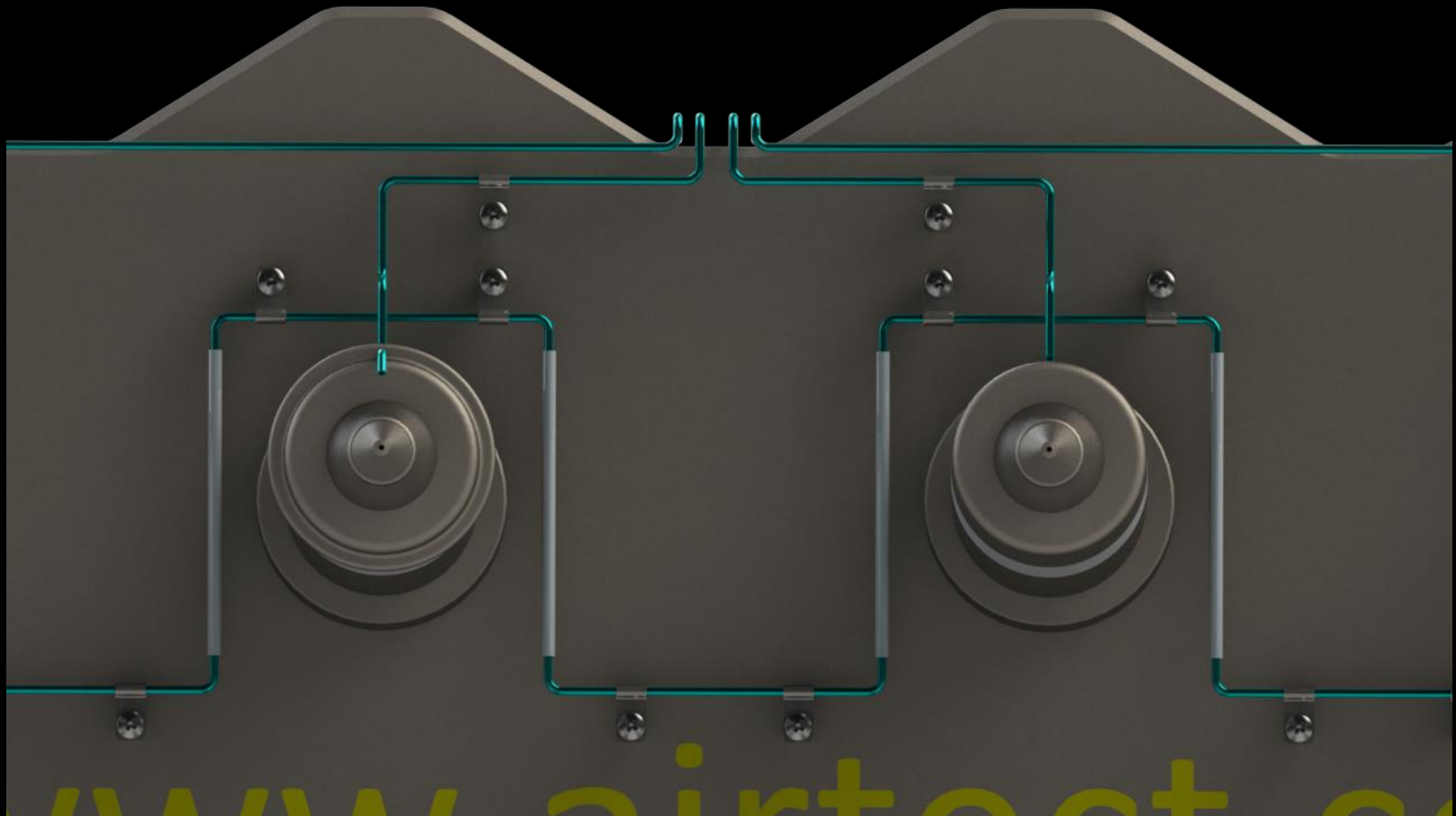


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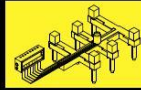
Plastic Leak Alarm System

**SENSOR TUBE INSTALLATION
RECOMMENDATIONS
'SERIES LINK'**



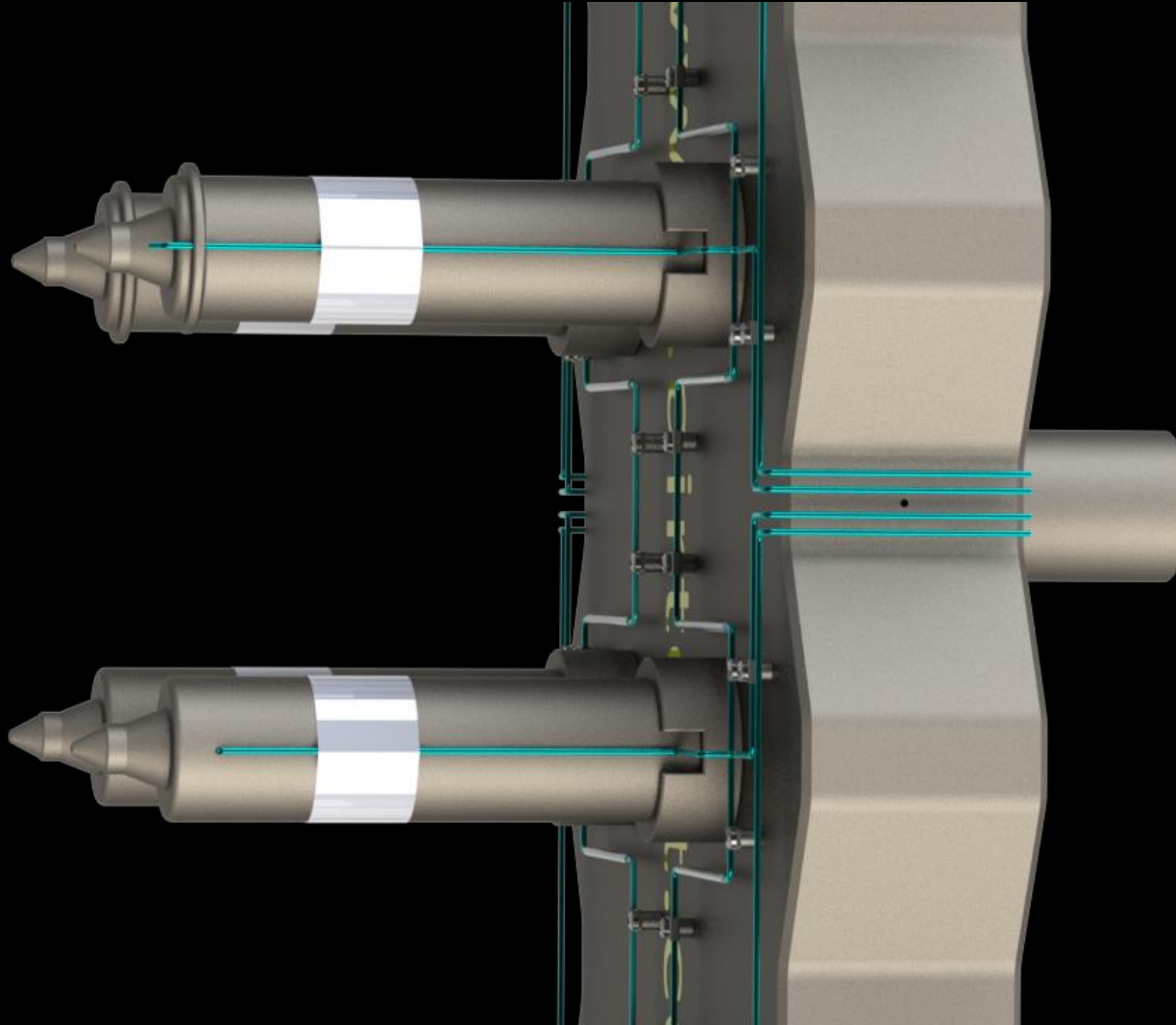
www.airtect.co.uk

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Plastic Leak Alarm System

**SENSOR TUBE INSTALLATION
RECOMMENDATIONS
'SERIES LINK'**





Plastic Leak Alarm System

**DETECT YOUR NOZZLE AND HOT
RUNNER LEAKS EARLY!! ☺**

**MULTI-ZONE LEAK DETECTION SYSTEMS ARE AVAILABLE WITH OR
WITHOUT PROGRAMMABLE CONTROL**

PROGRAMMABLE CONTROL ADVANTAGES (USING LA500 or LM2050)

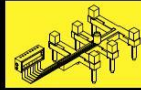
- **PROGRAMMABLE FUNCTIONS INCLUDE LEAK REPORTING AND INTERLOCK RELAY DELAY TIMERS, MANIFOLD TEMPERATURE ETC**
- **MULTIPLE MANIFOLD CONNECTION SYSTEMS (DAISY CHAIN).**
- **PROVIDE LEAK DETECTION AT MAIN INJECTION NOZZLE**

NON-PROGRAMMABLE CONTROL ADVANTAGES (STAND-ALONE MANIFOLDS)

- **LOW COST ALTERNATIVE**
- **LEAK LOCATION DISPLAYED ON MANIFOLD**
- **FIXED 10 SECOND INTERLOCK RELAY DELAY TIMER**
- **AVAILABLE IN FIXED OR MODULAR UNITS, SAME AS ABOVE.**
- **AUTO-RESET OF ALARMS**
- **SAME ELECTRICAL CONNECTIONS AS LA500/LM2050**
- **NO PCC CABLES**

NOTE: THESE UNITS CANNOT BE EXPANDED (DAISY CHAINED)

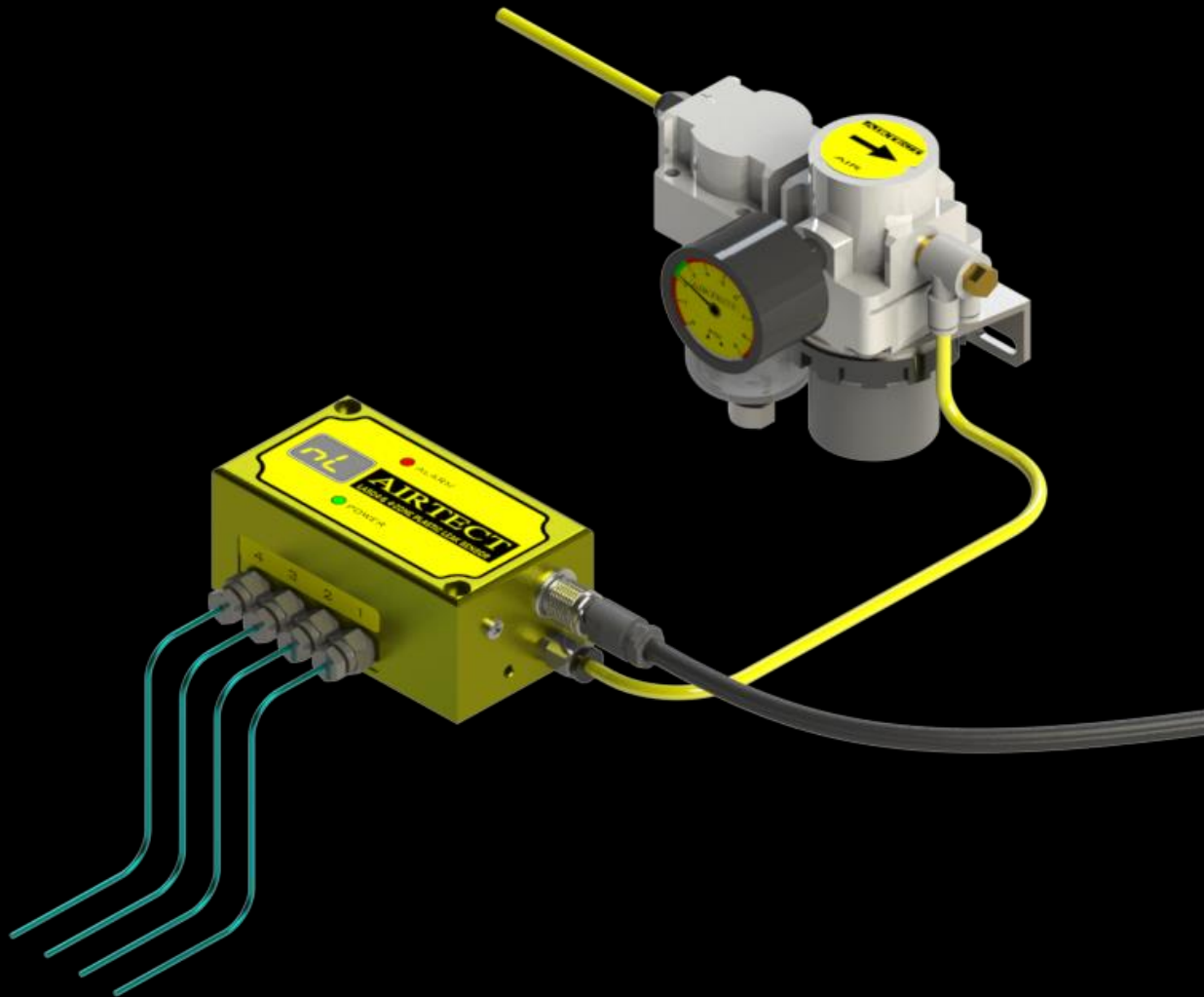
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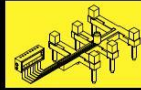
Plastic Leak Alarm System

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LA504S 4-ZONE 'STAND-ALONE' EXAMPLE



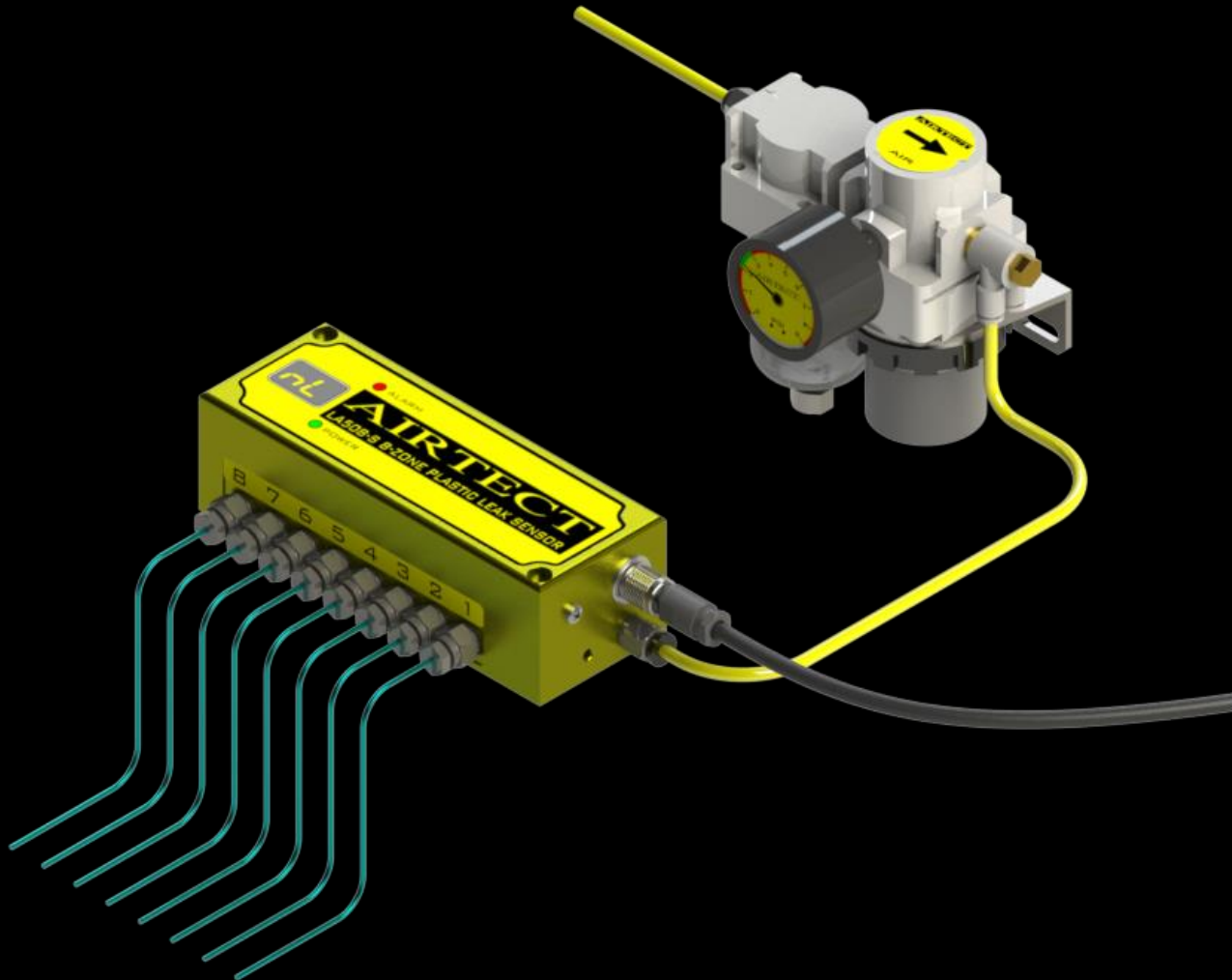
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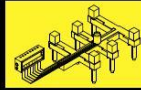
Plastic Leak Alarm System

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LA508S 8-ZONE 'STAND-ALONE' EXAMPLE



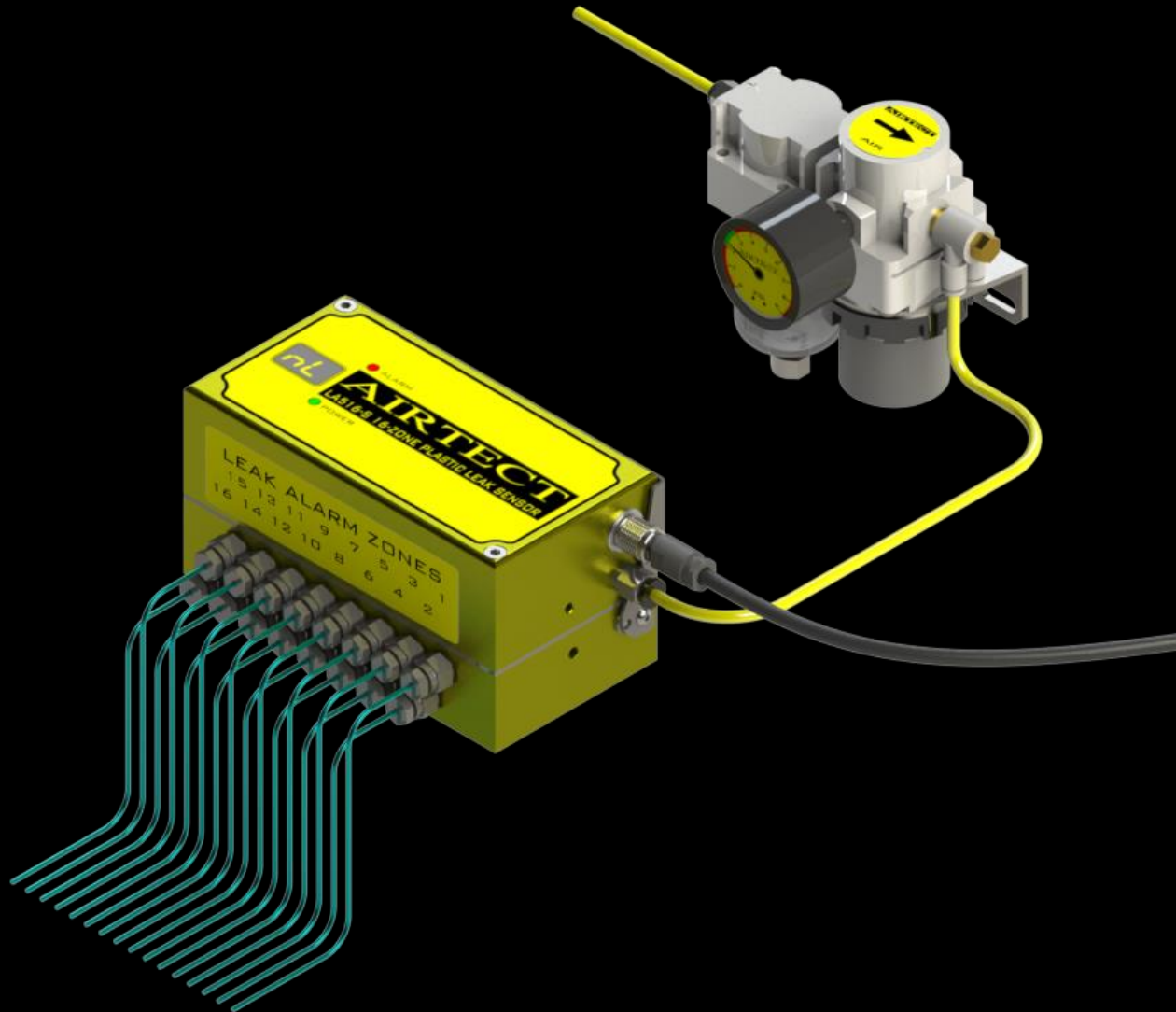
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Plastic Leak Alarm System

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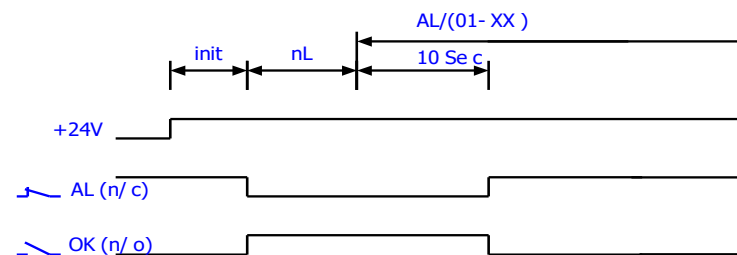
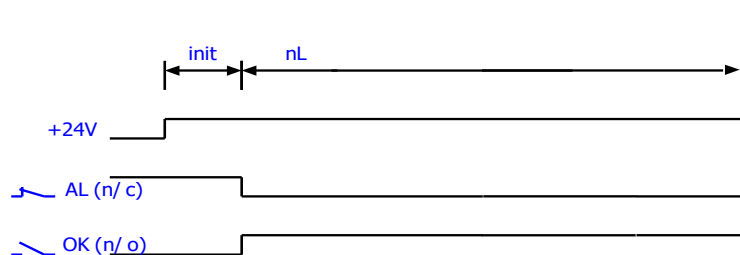
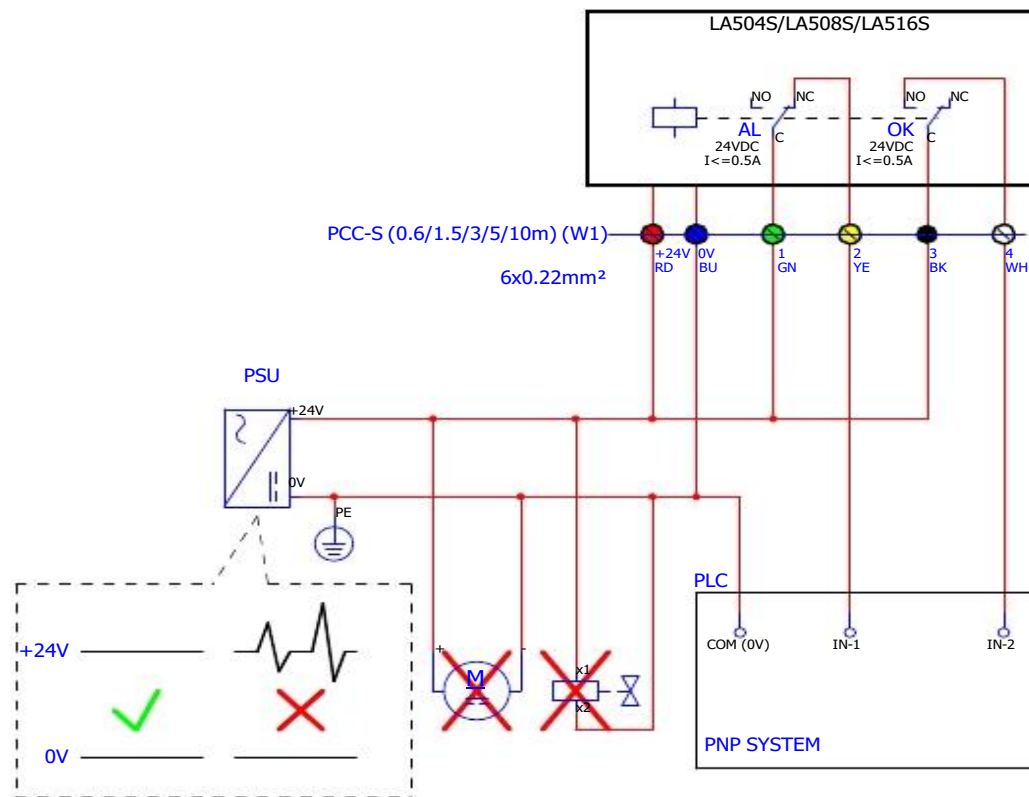
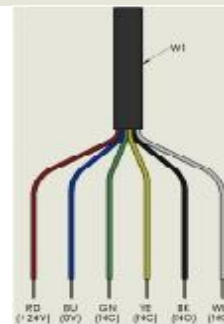
LA516S-M-S 16-ZONE 'STAND-ALONE' EXAMPLE



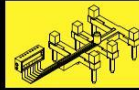


PNP SYSTEM

Ex : LA504S



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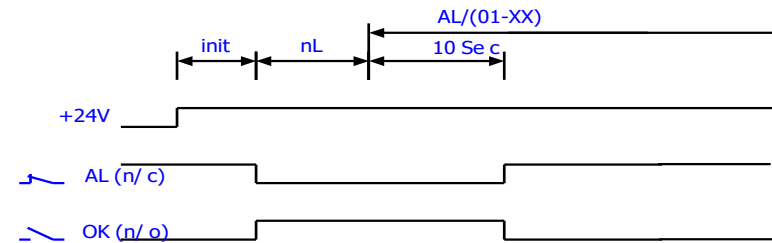
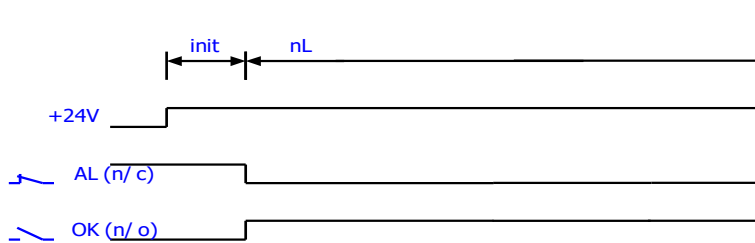
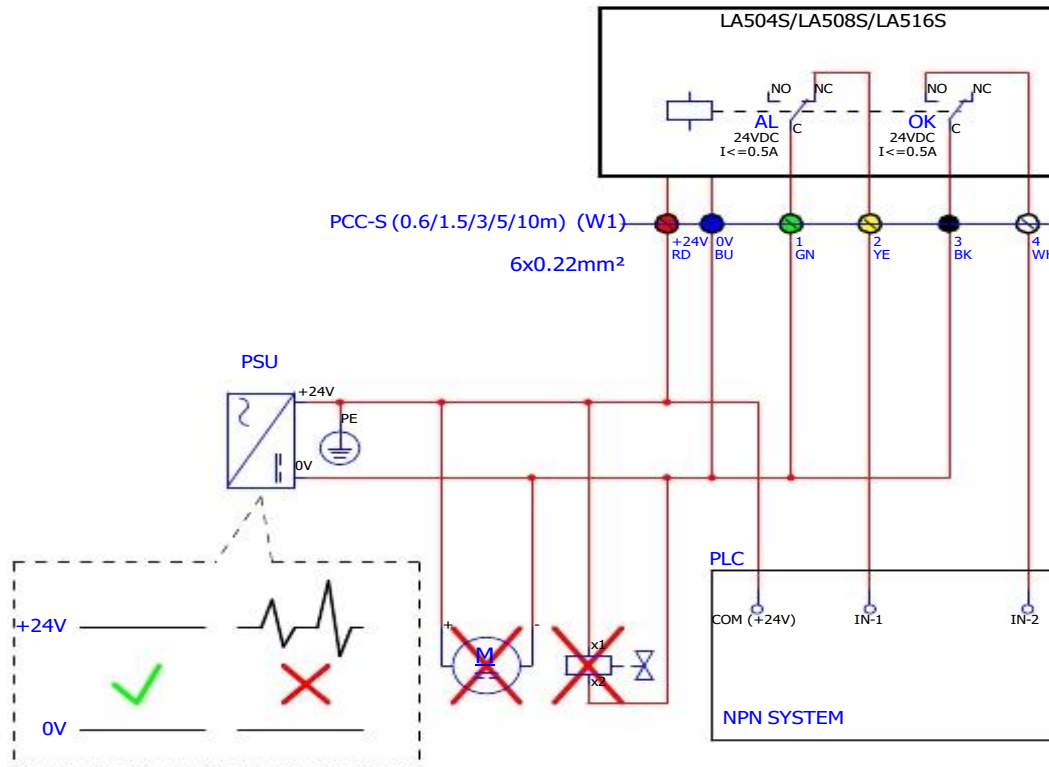
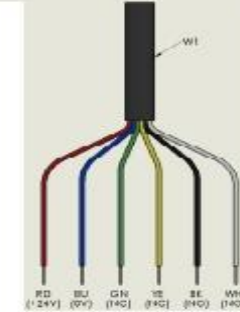


Plastic Leak Alarm System

LA504S/LA508S/LA516S ELECTRICAL INSTALLATION (stand alone manifolds)

NPN SYSTEM

Ex : LA504S



!!!

AIRTECH



Plastic Leak Alarm System

**DETECT YOUR NOZZLE AND HOT
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4-ZONE LEAK DETECTION SYSTEM OPTIONS WITH PROGRAMMABLE CONTROL

LA500



or

LM2050



+

LA504



+ PCC-X

FIXED 4-ZONE

LA500



or

LM2050



+

LA504-M-H



+ PCC-X

LA504-B



+

MODULAR 4-ZONE

LA500



or

LM2050



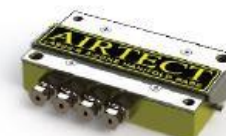
+

LA504-M-S



+ PCC-X

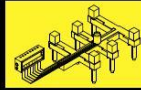
LA504-B



+

MODULAR 4-ZONE

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Plastic Leak Alarm System

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4-ZONE LEAK DETECTION SYSTEM OPTIONS WITHOUT PROGRAMMABLE CONTROL

LA504-S



FIXED STAND-ALONE 4-ZONE

LA504-S-M-H



+

LA504-B



MODULAR STAND-ALONE 4-ZONE

LA504-S-M-S



+

LA504-B



MODULAR STAND-ALONE 4-ZONE

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Plastic Leak Alarm System

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8-ZONE LEAK DETECTION SYSTEM OPTIONS WITH PROGRAMMABLE CONTROL

LA500



or

LM2050



+

+ PCC-X

LA508-N



FIXED 8-ZONE

LA500



or

LM2050



+

+ PCC-X

LA508-M-H-N



+

MODULAR 8-ZONE

LA508-B



LA500



or

LM2050



+

+ PCC-X

LA508-M-S-N



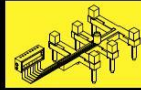
+

MODULAR 8-ZONE

LA508-B



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Plastic Leak Alarm System

**DETECT YOUR NOZZLE AND HOT
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8-ZONE LEAK DETECTION SYSTEM OPTIONS WITHOUT PROGRAMMABLE CONTROL

LA508-S



FIXED STAND-ALONE 8-ZONE

LA508-S-M-H



+

LA508-B



MODULAR STAND-ALONE 8-ZONE

LA504-S-M-S



+

LA508-B



MODULAR STAND-ALONE 8-ZONE

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16-ZONE LEAK DETECTION SYSTEM OPTIONS WITH PROGRAMMABLE CONTROL

LA500



or

LM2050



+

+ PCC-X

LA516-M-H-N



+

MODULAR 16-ZONE

LA516-B



LA500



or

LM2050



+

+ PCC-X

LA516-M-S-N



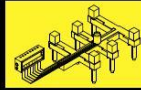
+

MODULAR 16-ZONE

LA516-B



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16-ZONE LEAK DETECTION SYSTEM OPTIONS WITHOUT PROGRAMMABLE CONTROL

LA516-S-M-H

LA516-B



MODULAR STAND-ALONE 16-ZONE

LA504-S-M-S

LA516-B



MODULAR STAND-ALONE 16-ZONE

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ACCESSORIES

AR-20GF



Air pressure regulator + gauge,
air filter and fittings

PU TUBE



Plastic tubing

PCC



Power/communication cable

TUBE-SIL



Silicone rubber tubing

LA-MAN-4



Tube adaptor

LA-MAN-2



Tube adaptor

NUT-SS



Nut and olive set

FIT-PU-SS



Fitting for tubing

FIT-SS-SS



Fitting for stainless tubing

TUBE-SS



Stainless steel tubing

BKT-SS

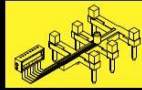


Fixing bracket

PCC-S



Power / Interlock cable



FREQUENTLY ASKED QUESTIONS

- **Q: How much compressed air is used?**

A: 0.05 Litres per minute per sensor of compressed air at 2PSI.

- **Q: What is the difference between the LA500 and LM2050.**

A: There is no functional difference. Only the Clear Text LCD display with multiple language options.

- **Q: How much DC power is required?**

A: 24Vdc @ 150mA average for LM2050 + LA508. Please note the DC power Source must be free from Electromagnetic Interference (EMI), caused by many devices such a solenoid valves, servo motors etc working on the sale DC power line. Good electrical practice will eliminate all potential problems.

- **Q: How long can the stainless steel sensor tubes be?**

A: The design is for a maximum of about 5 meters.

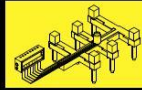
- **Q: What is the minimum bend radius for the stainless steel tubes without affecting air flow?**

A: R1.6mm for the 1.6mm diameter tube and R2 for the 2mm diameter tube.

- **Q: Where is the Silicone Rubber tube used?**

A: At the end of the stainless steel sensor tube at the main injection nozzle. It is also used within a Hot Runner mould where the temperature is less than 270°C.

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