



Pilot valve enclosures suitable for use in hazardous certified environments. These enclosures are designed and tested to contain the ignition of dust and gas clouds and any accumulated layers of dust.

3-6VDP Explosion Proof Enclosures

Diecast aluminium enclosure with explosion proof (Ex-e) protection suitable for use in hazardous areas, available optionally with anti-condensation heater.

The main hazard is the ignition of dust and gas clouds and any accumulated layers of dust on the surface of the equipment. This enclosure eliminates the possibility of arcs, sparks and hot surfaces. The enclosure's internal clearance distances, surface temperatures, impact strength and the protection against the ingress of moisture and solids are carefully controlled through design and manufacture. This protection concept is sometimes referred to as Ex-e, or Dust Ignition Proof (DIP). Explosion proof enclosures are distinguished from flame proof enclosures by the presence of a flange gasket.

Suitable for

NEC500 Division 1, NEC505 Zone 1 hazardous environments, for piloting Goyen diaphragm valves.

Construction

Body:	Al 2011-T3
Pilot body:	Al 2011-T3
Ferrule:	AISI 302 SS
Armature:	430FR SS
Seals:	Nitrile
Screws:	AISI 302 SS
Clips:	Plated mild steel

Maintenance

Annual maintenance of serviceable parts is recommended. Serviceable items are the pilot armature, armature spring, pilot valve body o-ring. The same model Goyen coil may also replace damaged coils. All other items are non-serviceable. Goyen recommend that appropriately qualified personnel conduct all maintenance activities. Certification of maintenance staff and facilities may be required under some certification schemes. Inappropriate service invalidates the product certifications.



Operation

Recommended on time:	50 - 150ms
On time range:	50 - 500ms
Recommended time between pulses:	1 minute or more, if maximum on time is used.

Pilot Performance

Flow:	0.27 Kv/0.32 Cv
Maximum Working Pressure:	860 kPa/125 psi
Minimum Working Pressure:	0 kPa/0 psi
Minimum Temperature:	-40°C/-40°F
Maximum Temperature:	82°C/-180°F
Fluid Media:	Air or inert gas

Restrictions

This product's hazardous areas certifications are valid only for product that has not been modified since leaving the factory. Modifications made to the enclosure such as the fitment of additional gaskets, the addition or removal of pilot valves and coils, changes in markings, or physical modifications made to the enclosure itself will invalidate the product certifications. Only activities described in 'Installation' and 'Maintenance' may be conducted without affecting the certification of the product.

Installation

WARNING: Ensure that power is isolated from the system prior to installing or opening this product. Where a heater kit is installed, ensure that the heater has been de-energised for a minimum of 5 minutes prior to opening the enclosure. Ensure that the enclosure is properly assembled with all flange screws fully tightened (minimum 10Nm (7.4 ft.lbs)) prior to applying power in a hazardous area.

Mounting

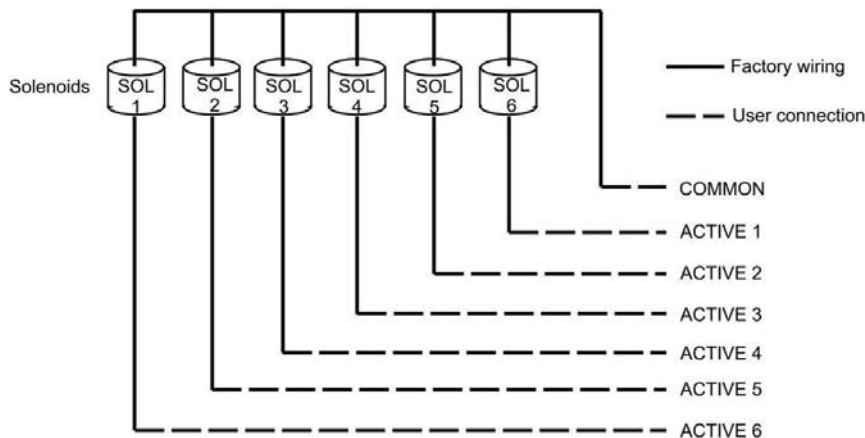
Enclosures should be mounted in a horizontal position, where the pilot valves and solenoid assemblies are in the preferred vertical orientation.

Threads

Pilot valve inlet and exhaust outlets are offered in both 1/8" BSPP (Rp) and NPT. The enclosure base has one conduit entry with either M25 or 3/4" NPT thread.

Electrical connections

Refer to diagram below. The included Goyen QT2 solenoids are provided with screw/spade terminals. These solenoids are neutrally linked at the factory for customer convenience.



Pneumatic connections

These pilot valves are connected to the dust collector reverse pulse jet valves using metric 4mm tubing (ID 0.157") or imperial 1/4" tubing (ID 0.162") and maximum length of 1.5m (4.9 ft).

Solenoid Performance

Voltage	Inrush Current mA	Hold Current mA	Power
220/240 50/60 Hz	148/143	105/94	23.1 VA
100/120 50/60 Hz	234/255	180/152	19.8 VA
24 VDC	873	873	20 W

3-6VDP Product

Certifications and Markings

UL

With heater kit fitted	Without heater kit fitted
Listed 823N	Listed 823N
Class II	Class II
Groups E, F & G	Groups E, F & G
Nema 9	Nema 9
Op. Temp Code T3C	Op. Temp Code T6

SAA

With heater kit fitted	Without heater kit fitted
DIP A21	DIP A21
T3 IP65	T6 IP65
Aus Ex 1212X	Aus Ex 1212X

Product warning labels

UL

WARNING to prevent ignition of hazardous atmospheres disconnect all supply of circuits before opening enclosure. keep tightly closed when in operation.

SAA (enclosures with heaters)

WARNING: do not open enclosure whilst energised. isolate elsewhere and allow a minimum of 5 minutes after heater is de-energised before removing cover.

SAA (enclosures without heaters)

WARNING: do not open enclosure whilst energised. isolate elsewhere before removing cover.

Anti-Condensation Heater Elements

According to model specification number, this enclosure type may be factory fitted with a heater element to assist in the prevention of condensation within the enclosure.

Heater ratings

Voltage	Watts
24VDC	48
110/120VAC	100
220/240VAC	100

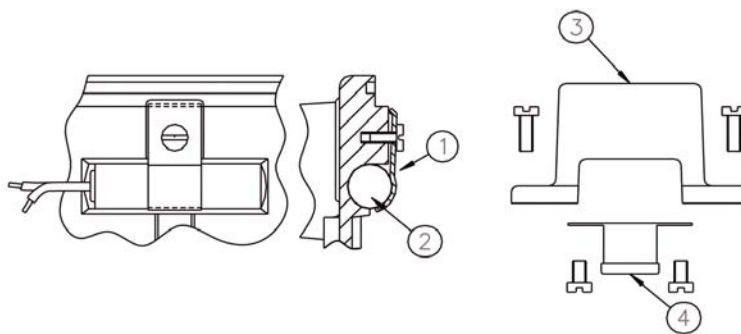
Note that heater voltage matches solenoid voltages.

Spare Parts

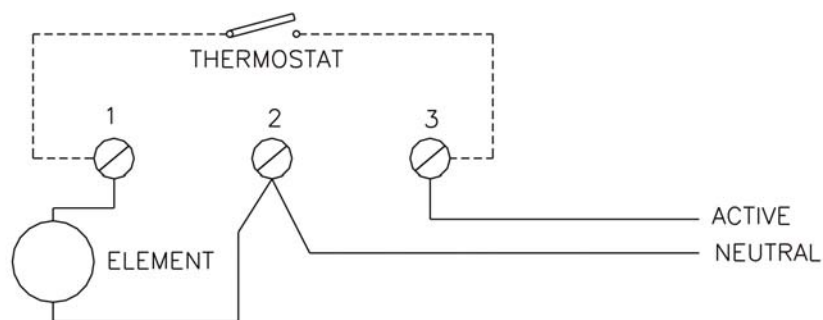
K0380: Single armature kit. Includes spring, armature and o-ring

G604490: Flange gasket

Heater terminal block connections



1. Heater retaining clip
2. Heater element
3. Wiring terminal block
4. Thermostat element



Order Codes

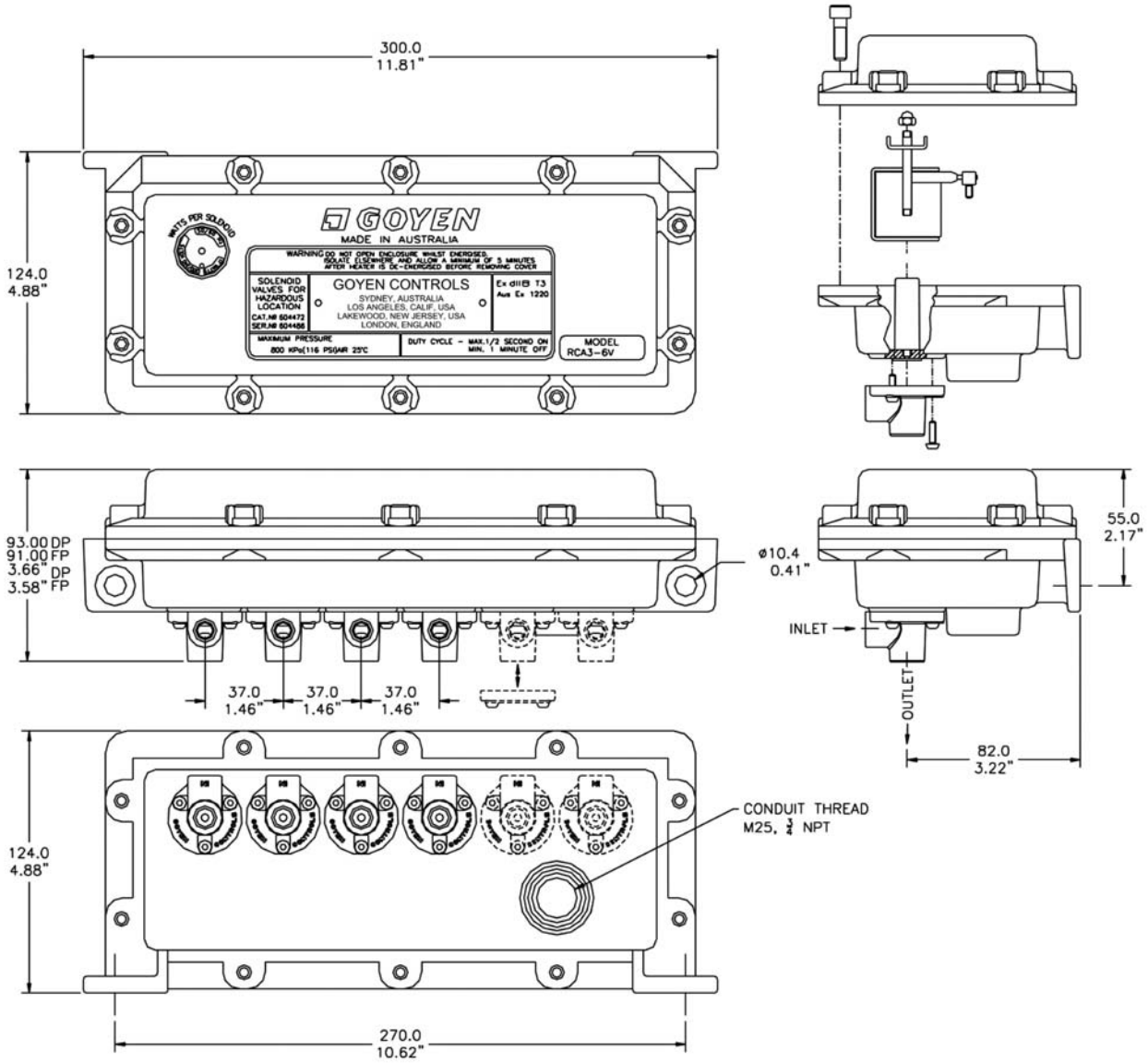
Each individual enclosure configuration is controlled under a unique specification number in accordance with the product's Certification. The list below only represents a portion of the legally configurable Goyen 3-6V ranges. Please contact your Goyen representative if you require a configuration not represented here.

Spec. No* UL Cert.	Pilots	Voltage	Fitted Heater	Pilot Thread (NPT)	Conduit Thread (NPT)	Spec. No* SAA Cert.	Pilots	Voltage	Fitted Heater	Pilot Thread	Conduit Thread
4T3/2401*	4	100/120VAC	Yes	1/8"	3/4"	4T6/2436	4	24VDC	No	Rp 1/8	M25
4T3/3333*	4	220/240VAC	Yes	1/8"	3/4"	4T6/2523	4	100/120VAC	No	Rp 1/8	M25
4T6/2679	4	100/120VAC	No	1/8"	3/4"	4T6/2554	4	220/240VAC	No	Rp 1/8	M25
4T6/2907*	4	220/240VAC	No	1/8"	3/4"	4T6/2810	4	220/240VAC	No	Rp 1/8	M25
4T6/2955*	4	24VDC	No	1/8"	3/4"	5T6/2394	5	220/240VAC	No	Rp 1/8	M25
4T6/3109	4	100/120VAC	No	1/8"	3/4"	5T6/2580	5	100/120VAC	No	Rp 1/8	M25
5T3/2673*	5	100/120VAC	Yes	1/8"	3/4"	5T6/2692	5	24VDC	No	Rp 1/8	M25
5T6/2400*	5	100/120VAC	No	1/8"	3/4"	5T6/2727	5	24VDC	No	Rp 1/8	M25
5T6/2906*	5	220/240VAC	No	1/8"	3/4"	6T6/2390	6	100/120VAC	No	Rp 1/8	M25
5T6/2939*	5	24VDC	No	1/8"	3/4"	6T6/2438	6	220/240VAC	No	Rp 1/8	M25
6T3/2674*	6	100/120VAC	Yes	1/8"	3/4"	6T6/2728	6	24VDC	No	Rp 1/8	M25
6T3/2931*	6	24VDC	Yes	1/8"	3/4"	6T3/3397	6	220/240VAC	Yes	Rp 1/8	M25
6T6/2399*	6	100/120VAC	No	1/8"	3/4"						
6T6/2905*	6	220/240VAC	No	1/8"	3/4"						
6T6/3014*	6	24VDC	No	1/8"	3/4"						
6T6/3300	6	100/120VAC	No	1/8"	3/4"						

Please Note: When ordering, add the enclosure number to the beginning of the specification number, e.g. 3-6VDP4T6/2436.

*No Goyen label on product

Dimensions (in mm (inches))



Weight

Mass = 2.21 Kg + 0.08 Kg per fitted pilot
(4.87 lbs + 0.18 lbs per fitted pilot)