



*Pilot Valves and
Nema 4 Enclosures*

Innovative Environmental Solutions

tyco | Flow Control | **Environmental Systems**

Technical Specification
Q Series Solenoid

Solenoid used in the remote or integral actuation of dust collector diaphragm or pilot valves.



Flying leads, QF



Screws/spade terminals, QT2



DIN 43650A connection, QR



Conduit entry connection, QD

Suitable for

All integrally piloted Goyen dust collector diaphragm valves, RCA3D series pilot valves and pilot valve enclosures, and 3DS pilot valves.

Installation

Slide solenoid over ferrule tube. Ensure terminals are on top. For QT and QF type solenoids ensure nylon washer is in place. Slide clip onto pilot iron top. Ensure voltage supplied to solenoid is within -10% and +15% of the solenoid rated voltage.

Construction

- Encapsulation: PA-6
- C-frame: Mild steel zinc passivated
- Bobbin: PA-6
- Insulation class: B/130°C
- Rating: Non-continuous use only
- Clip: Mild steel (mechanically plated)

Operation

- Recommended on time range: 50-500ms
- Recommended time between pulses: 1 minute or greater

Approvals

- C-Tick
- EMC (89/336/CE)

Options

None

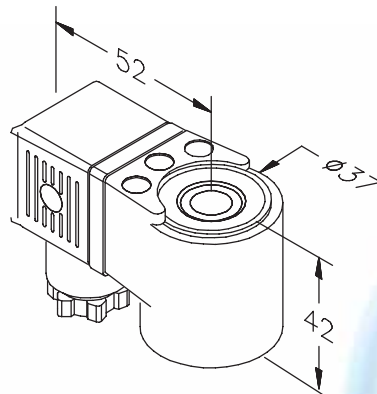
Spare Parts

None available

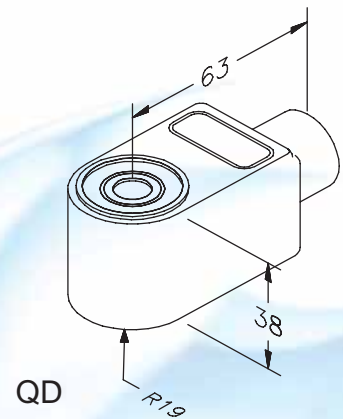
Dimensions and Weights

(Dimensions in mm)

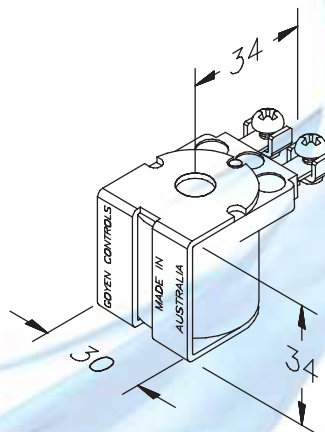
Series	Weight
QR	0.146 kg/0.322 lb
QD	0.210 kg/0.463 lb
QT2	0.106 kg/0.234 lb
QF	0.098 kg/0.216 lb



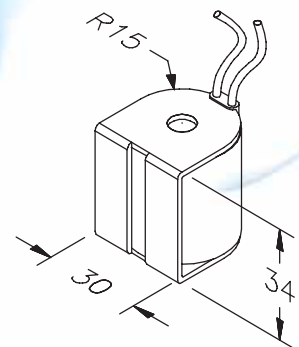
QR



QD



QT2



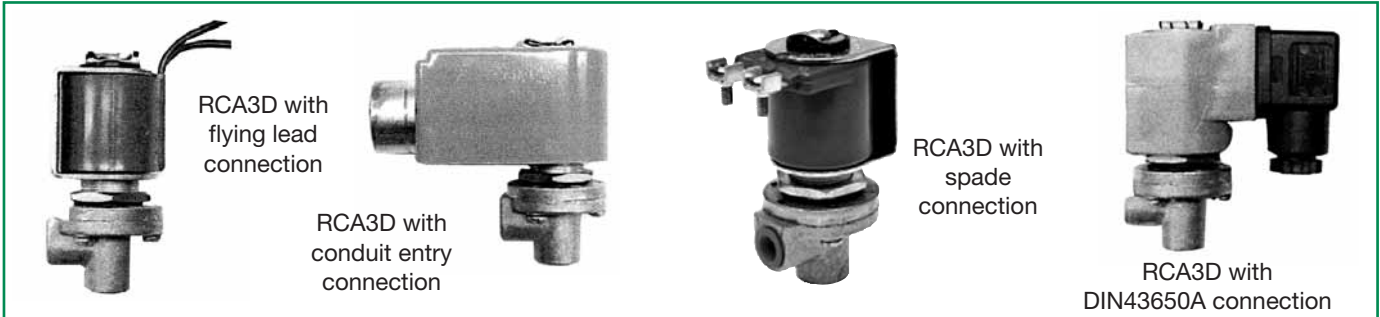
QF

Order Code and Electrical Characteristics

Code K-	Type	Connection Type	Class	Voltage	Inrush mA	Hold mA	Power	Colour
300	QR	DIN 43650A	IP64	200/240V 50/60Hz	148/143	105/94	23.1 VA	Grey
301	QR	DIN 43650A	IP64	100/120V 50/60Hz	234/255	180/152	19.8 VA	Grey
302	QR	DIN 43650A	IP64	24V 50/60 Hz	1338/1096	963/716	23.1 VA	Grey
303	QR	DIN 43650A	IP64	110VDC	212	212	24 W	Grey
304	QR	DIN 43650A	IP64	48VDC	429	429	20 W	Grey
305	QR	DIN 43650A	IP64	24VDC	873	873	20 W	Grey
306	QR	DIN 43650A	IP64	12VDC	1644	1644	20 W	Grey
310	QD	Conduit (M20x1.5)	IP31	200/240V 50/60Hz	148/143	105/94	23.1 VA	Green
311	QD	Conduit (M20x1.5)	IP31	100/120V 50/60Hz	234/255	180/152	19.8 VA	Green
312	QD	Conduit (M20x1.5)	IP31	24V 50/60 Hz	1338/1096	963/716	23.1 VA	Green
313	QD	Conduit (M20x1.5)	IP31	24VDC	873	873	20 W	Green
314	QD	Conduit (M20x1.5)	IP31	12VDC	1644	1644	20 W	Green
320	QD	Conduit (½" NPSC)	IP31	200/240V 50/60Hz	148/143	105/94	23.1 VA	Green
321	QD	Conduit (½" NPSC)	IP31	100/120V 50/60Hz	234/255	180/152	19.8 VA	Green
322	QD	Conduit (½" NPSC)	IP31	24V 50/60 Hz	1338/1096	963/716	23.1 VA	Green
323	QD	Conduit (½" NPSC)	IP31	24VDC	873	873	20 W	Green
324	QD	Conduit (½" NPSC)	IP31	12VDC	1644	1644	20 W	Green
330	QT2	Screw / spade	N/A	200/240V 50/60Hz	148/143	105/94	23.1 VA	Purple
331	QT2	Screw / spade	N/A	100/120V 50/60Hz	234/255	180/152	19.8 VA	Purple
332	QT2	Screw / spade	N/A	24V 50/60 Hz	1338/1096	963/716	23.1 VA	Purple
333	QT2	Screw / spade	N/A	240VDC	94	94	24 W	Purple
334	QT2	Screw / spade	N/A	110VDC	212	212	24 W	Purple
335	QT2	Screw / spade	N/A	48VDC	429	429	20 W	Purple
336	QT2	Screw / spade	N/A	24VDC	873	873	20 W	Purple
337	QT2	Screw / spade	N/A	12VDC	1644	1644	20 W	Purple
338	QT2	Screw / spade	N/A	12VDC	2500	2500	30 W	Orange
340	QF	Flying leads	IP64	200/240V 50/60Hz	1338/1096	963/716	23.1 VA	Purple
341	QF	Flying leads	IP64	100/120V 50/60Hz	94	94	19.8 VA	Purple
342	QF	Flying leads	IP64	24V 50/60 Hz	212	212	23.1 VA	Purple
343	QF	Flying leads	IP64	24VDC	873	873	20 W	Purple
344	QF	Flying leads	IP64	12VDC	1644	1644	20 W	Purple
348	QF	Flying leads	IP64	12VDC	2500	2500	30 W	Orange
349	QF	Flying leads	IP64	36V 50Hz	555	350	15.6 VA	Purple

Technical Specification
RCA3D Remote Pilot

Remote solenoid pilot valve to control the actuation of dust collector diaphragm valves.



Suitable for

All Goyen dust collector diaphragm valves.

Installation

Prepare pilot mounting hole in panel to Ø19.3/19.4 (Ø0.760"). Panel thickness must exceed 1.5mm (0.062"). Ensure o-ring is in place before tightening locknut. Preferably, install pilot valves with solenoid on top. For reliable operation, ensure supply voltage is within -10% and +15% of rated solenoid voltage. Replace components within 1 million cycles (refer to Spare Parts)

Construction

- Body: Aluminium (diecast)
- Ferrule: 304 SS
- Armature: 430FR SS
- Seals: Nitrile
- Locknut: Mild steel zinc passivated
- Screws: 302 SS
- Clip: Mild steel (plated)

Operation

Recommended on time range: 50-500ms
Recommended time between pulses: 1 minute or greater

Approvals

- C-Tick
- EMC (89/336/CE)

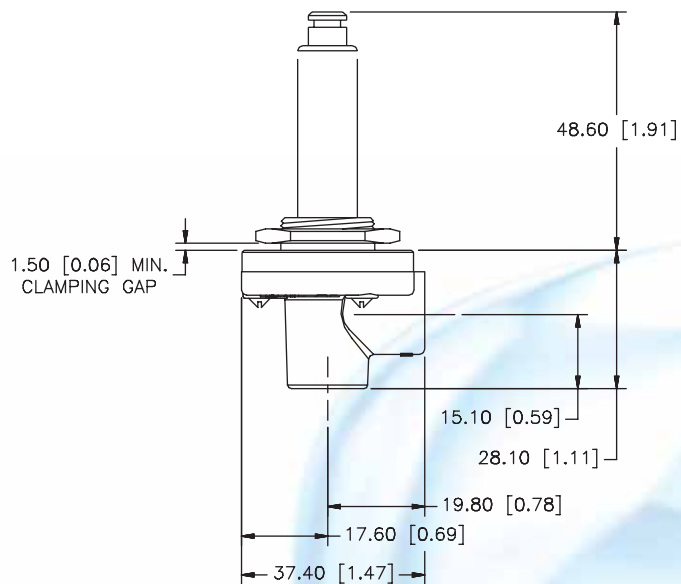
Options

None

Dimensions and Weights

(Dimensions in mm and inches)

Series	Weight
RCA3D0, RCA3D1 (no solenoid)	0.174 kg/0.384 lb



Product Performance

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

Order Code*

Model	Thread Type	Orifice Size
RCA3D0-...	1/8" NPT	3.2mm (0.126")
RCA3D1-...	1/8" BSPP	3.2mm (0.126")

*Please refer to Q Series Solenoid product data sheet on Page 3 for information on electrical characteristics and to complete the order code, e.g. 1/8" NPT pilot valve with 240VAC solenoid = RCA3D0-300

Spare Parts

- K0380 Replacement seal, armature, spring & ferrule kit.
- K0384 As above in viton.

Order Code and Electrical Characteristics

Model	Connection Type	Protection Class	Voltage	Power
3D0 Series = 1/8" NPT				
3D0-300	DIN 43650A	IP64	200/240V 50/60Hz	23.1 VA
3D0-301	DIN 43650A	IP64	100/120V 50/60Hz	19.8 VA
3D0-302	DIN 43650A	IP64	24V 50/60 Hz	23.1 VA
3D0-303	DIN 43650A	IP64	110VDC	24 W
3D0-304	DIN 43650A	IP64	48VDC	20 W
3D0-305	DIN 43650A	IP64	24VDC	20 W
3D0-306	DIN 43650A	IP64	12VDC	20 W
3D0-310	Conduit (M20x1.5)	IP31	200/240V 50/60Hz	23.1 VA
3D0-311	Conduit (M20x1.5)	IP31	100/120V 50/60Hz	19.8 VA
3D0-312	Conduit (M20x1.5)	IP31	24V 50/60 Hz	23.1 VA
3D0-313	Conduit (M20x1.5)	IP31	24VDC	20 W
3D0-314	Conduit (M20x1.5)	IP31	12VDC	20 W
3D0-320	Conduit (1/2" NPSC)	IP31	200/240V 50/60Hz	23.1 VA
3D0-321	Conduit (1/2" NPSC)	IP31	100/120V 50/60Hz	19.8 VA
3D0-322	Conduit (1/2" NPSC)	IP31	24V 50/60 Hz	23.1 VA
3D0-323	Conduit (1/2" NPSC)	IP31	24VDC	20 W
3D0-324	Conduit (1/2" NPSC)	IP31	12VDC	20 W
3D0-330	Screw / spade	N/A	200/240V 50/60Hz	23.1 VA
3D0-331	Screw / spade	N/A	100/120V 50/60Hz	19.8 VA
3D0-332	Screw / spade	N/A	24V 50/60 Hz	23.1 VA
3D0-333	Screw / spade	N/A	240VDC	24 W
3D0-334	Screw / spade	N/A	110VDC	24 W
3D0-335	Screw / spade	N/A	48VDC	20 W
3D0-336	Screw / spade	N/A	24VDC	20 W
3D0-337	Screw / spade	N/A	12VDC	20 W
3D0-340	Flying Lead	IP64	200/240V 50/60Hz	23.1 VA
3D0-341	Flying Lead	IP64	100/120V 50/60Hz	19.8 VA
3D0-342	Flying Lead	IP64	24V 50/60 Hz	23.1 VA
3D0-343	Flying Lead	IP64	24VDC	20 W
3D0-344	Flying Lead	IP64	12VDC	20 W
3D1 Series = 1/8" BSPP				
3D1-300	DIN 43650A	IP64	200/240V 50/60Hz	23.1 VA
3D1-301	DIN 43650A	IP64	100/120V 50/60Hz	19.8 VA
3D1-302	DIN 43650A	IP64	24V 50/60 Hz	23.1 VA
3D1-303	DIN 43650A	IP64	110VDC	24 W
3D1-304	DIN 43650A	IP64	48VDC	20 W
3D1-305	DIN 43650A	IP64	24VDC	20 W
3D1-306	DIN 43650A	IP64	12VDC	20 W
3D1-310	Conduit (M20x1.5)	IP31	200/240V 50/60Hz	23.1 VA
3D1-311	Conduit (M20x1.5)	IP31	100/120V 50/60Hz	19.8 VA
3D1-312	Conduit (M20x1.5)	IP31	24V 50/60 Hz	23.1 VA
3D1-313	Conduit (M20x1.5)	IP31	24VDC	20 W
3D1-314	Conduit (M20x1.5)	IP31	12VDC	20 W
3D1-320	Conduit (1/2" NPSC)	IP31	200/240V 50/60Hz	23.1 VA
3D1-321	Conduit (1/2" NPSC)	IP31	100/120V 50/60Hz	19.8 VA
3D1-322	Conduit (1/2" NPSC)	IP31	24V 50/60 Hz	23.1 VA
3D1-323	Conduit (1/2" NPSC)	IP31	24VDC	20 W
3D1-324	Conduit (1/2" NPSC)	IP31	12VDC	20 W
3D1-330	Screw / spade	N/A	200/240V 50/60Hz	23.1 VA
3D1-331	Screw / spade	N/A	100/120V 50/60Hz	19.8 VA
3D1-332	Screw / spade	N/A	24V 50/60 Hz	23.1 VA
3D1-333	Screw / spade	N/A	240VDC	24 W
3D1-334	Screw / spade	N/A	110VDC	24 W
3D1-335	Screw / spade	N/A	48VDC	20 W
3D1-336	Screw / spade	N/A	24VDC	20 W
3D1-337	Screw / spade	N/A	12VDC	20 W
3D1-340	Flying Lead	IP64	200/240V 50/60Hz	23.1 VA
3D1-341	Flying Lead	IP64	100/120V 50/60Hz	19.8 VA
3D1-342	Flying Lead	IP64	24V 50/60 Hz	23.1 VA
3D1-343	Flying Lead	IP64	24VDC	20 W
3D1-344	Flying Lead	IP64	12VDC	20 W

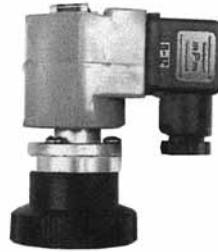
Notes: RCA3D0-305 is an RCA3D remote pilot with 1/8" NPT threads and a 24VDC DIN43650A connection.
 RCA3D1-331 is an RCA3D remote pilot with 1/8" BSPP threads and 110/240VAC spade screw coil.

Technical Specification
3DS Pilot Valve

Pilot valve with integral silencer and dust shroud to mount directly to dust collector diaphragm valve.



3DS-0



3DS-300 to
3DS-306



3DS-310 to
3DS-324

Suitable for

RCAC20T3, RCAC20ST3,
RCAC20DD3, RCAC20FS3,
RCAC25T3, RCAC25DD3,
RCAC25FS3 dust collector valves only.

Installation

Ensure o-ring is in place on diaphragm valve cover. Gripping the shroud, hand tighten 3DS pilot valve onto cover of diaphragm valve. For reliable operation, ensure supply voltage is within -10% and +15% of rated solenoid voltage. Solenoid is free to rotate on pilot valve. 3DS thread will suit 1/8 BSP T, 1/8 BSP P and 1/8 NPT ports. Replace pilot components within 1 million cycles (refer to Spare Parts).

Construction

Body: Al 2011-T3
Ferrule: 302 SS
Armature: 430FR SS
Encapsulation: PA-6
Insulation: Class B/130°C
Seals: Nitrile
Shroud: PA-6

Operation

Recommended on time range: 50-500ms
Recommended time between pulses: 1 minute or greater

Approvals

- C-Tick
- EMC (89/336/CE)

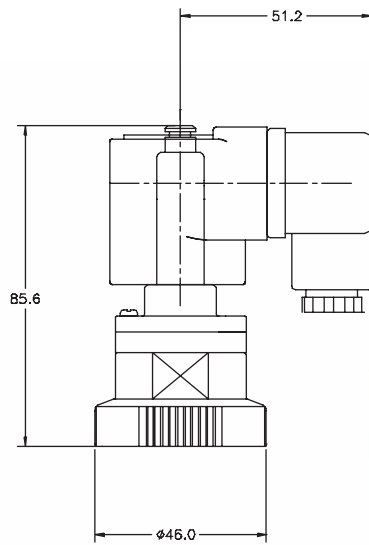
Options

None

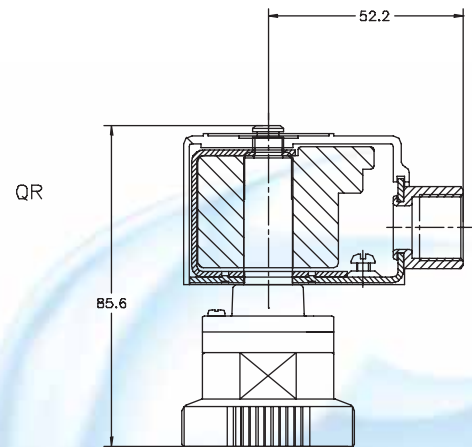
Dimensions and Weights

(Dimensions in mm)

Series	Weight
3DS-0	0.096 kg / 0.211 lb
3DS-300 to 3DS-306	0.246 kg / 0.542 lb
3DS-310 to 3DS-324	0.266 kg 0.586 lb



3DS-300 to 3DS-306



3DS-310 to 3DS-324

Product Performance

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

Spare Parts

K0380 Nitrile replacement seal, armature, spring and ferrule.
K0384 As above in viton rubber.

Order Code and Electrical Characteristics

Model	Connection Type	Protection Class	Voltage	Power
3DS-300	DIN 43650A	IP64	200/240V 50/60Hz	23.1 VA
3DS-301	DIN 43650A	IP64	100/120V 50/60Hz	19.8 VA
3DS-302	DIN 43650A	IP64	24V 50/60 Hz	23.1 VA
3DS-303	DIN 43650A	IP64	110VDC	24 W
3DS-304	DIN 43650A	IP64	48VDC	20 W
3DS-305	DIN 43650A	IP64	24VDC	20 W
3DS-306	DIN 43650A	IP64	12VDC	20 W
3DS-310	Conduit (M20x1.5)	IP31	200/240V 50/60Hz	23.1 VA
3DS-311	Conduit (M20x1.5)	IP31	100/120V 50/60Hz	19.8 VA
3DS-312	Conduit (M20x1.5)	IP31	24V 50/60 Hz	23.1 VA
3DS-313	Conduit (M20x1.5)	IP31	24VDC	20 W
3DS-314	Conduit (M20x1.5)	IP31	12VDC	20 W
3DS-320	Conduit (1/2" NPSC)	IP31	200/240V 50/60Hz	23.1 VA
3DS-321	Conduit (1/2" NPSC)	IP31	100/120V 50/60Hz	19.8 VA
3DS-322	Conduit (1/2" NPSC)	IP31	24V 50/60 Hz	23.1 VA
3DS-323	Conduit (1/2" NPSC)	IP31	24VDC	20 W
3DS-324	Conduit (1/2" NPSC)	IP31	12VDC	20 W

Technical Specification NEMA4/Raintight/
ATEX II 3 D G Diecast Pilot Valve
Enclosures (5, 8, 12 valve)

**Diecast aluminium enclosures for Goyen
RCA3D pilot valves, available optionally
with anti-condensation heater.**



3-5V Enclosure



3-8V Enclosure



3-12V Enclosure

Suitable for

ATEX Category Ex II 3 GD and Ex II 2D IP64 and all other non-hazardous applications, for piloting Goyen diaphragm valves.

Installation

Ensure device is disconnected from power before opening the enclosure. These enclosures are all finished with the common solenoid terminals pre-wired.

For reliable operation, ensure supply voltage is within -10% and +15% of rated solenoid voltage.

To guarantee NEMA4 performance ensure gasket is in place when attaching lid to enclosure base. Replace components within 1 million cycles (refer to Spare Parts).

Construction

- Body: Aluminium (diecast)
- Pilot Body: Aluminium (diecast)
- Ferrule: 302 SS
- Armature: 430FR SS
- Seals: Nitrile
- Screws: 302 SS
- Clip: Mild steel (plated)
- Pilot Valve Thread Type: PA-6
- Conduit Entry Thread Type: PA-6

Operation

- Recommended on time range: 50-500ms
- Recommended time between pulses: 1 minute or greater

Options

None

Product Performance

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

Refer to Q Series Solenoid product specification for electrical performance details.

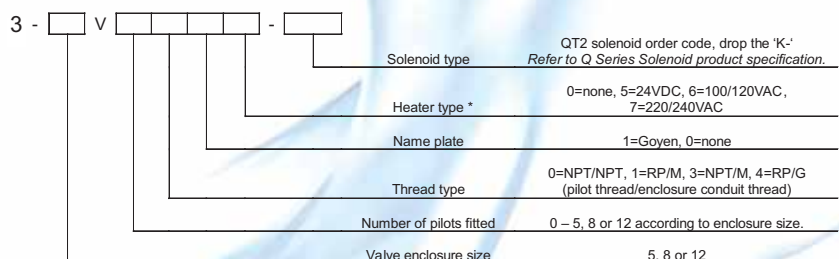
Approvals

- C-Tick
- EMC (89/336/CE)

Spare Parts

- K0380 Nitrile replacement seal, armature, spring & ferrule kit.
- K0384 As above in viton.
- RCA3D0-*** Replacement pilot assemblies.
- RCA3D1-*** Refer to RCA3D Remote Pilot product data sheet.

Order Code



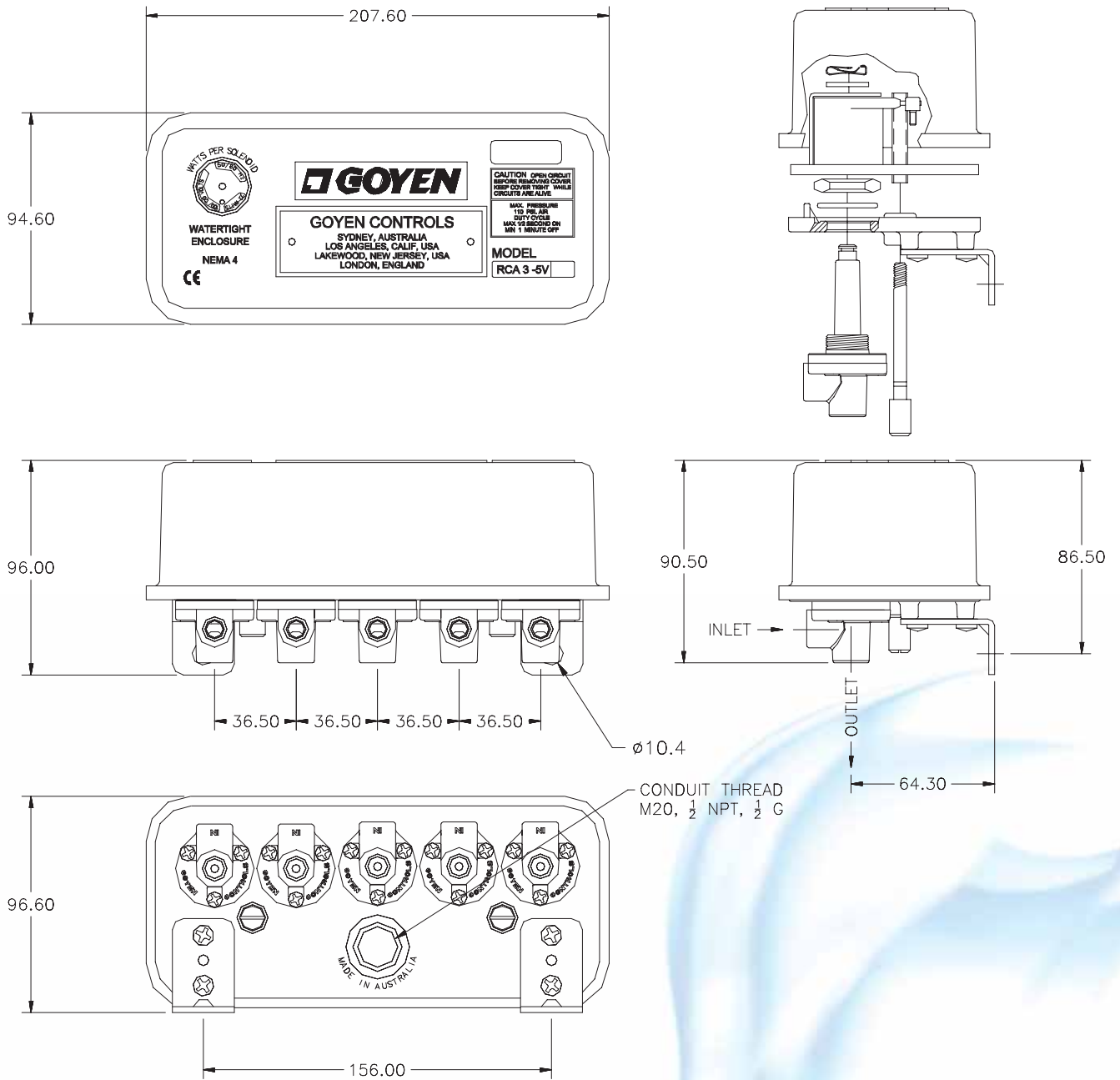
Example: 3-8V6010-330
8 valve enclosure, fitted with 6 pilots, with NPT pilot and conduit thread type, Goyen name plate, no heater element and 220/240VAC 50/60Hz solenoids.

Note that enclosures are pre-wired with QT2 type solenoids only.

* = heaters currently not available in 3-5V5 and 3-12V12 enclosures.

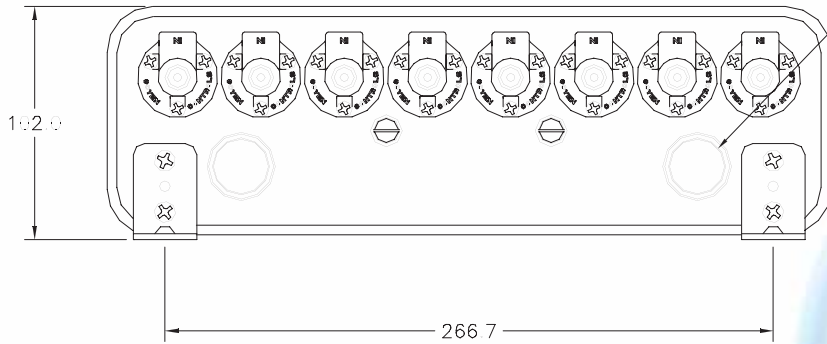
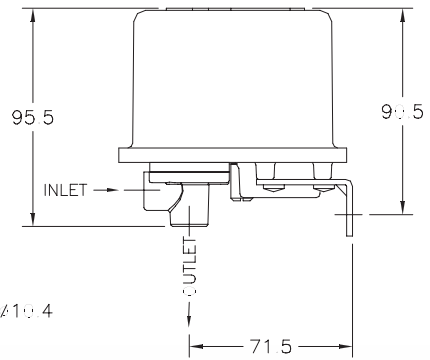
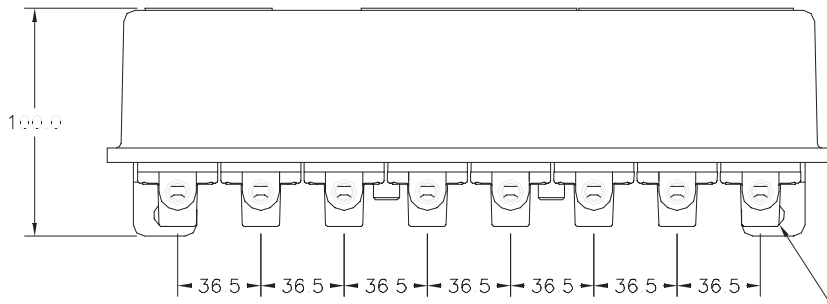
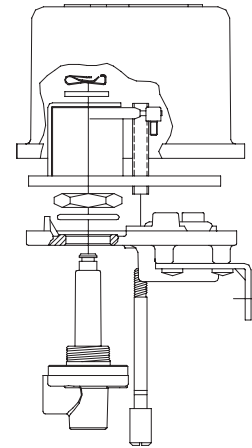
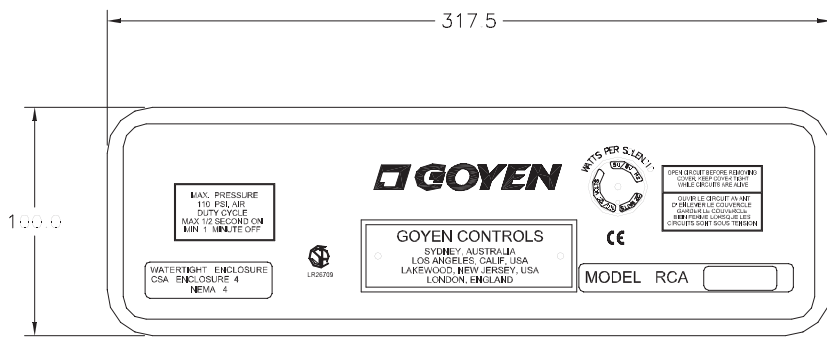
Dimensions and Weights

(Dimensions in mm)



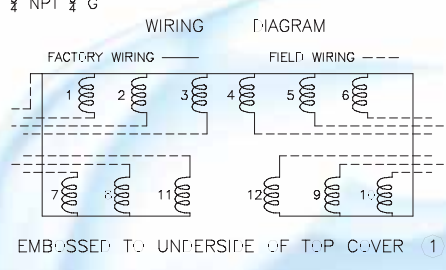
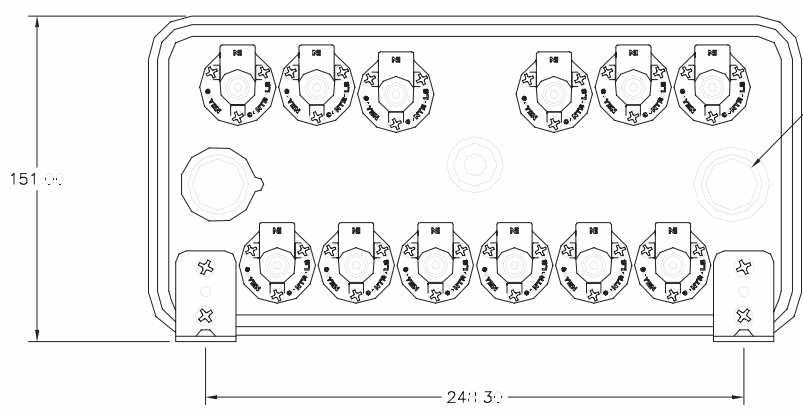
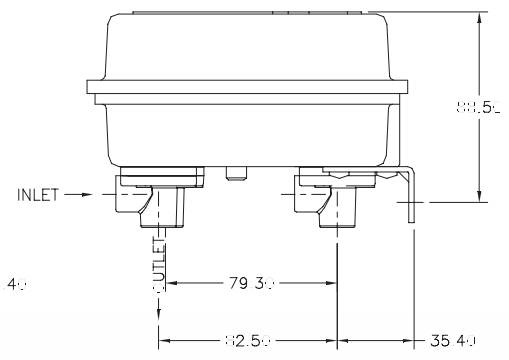
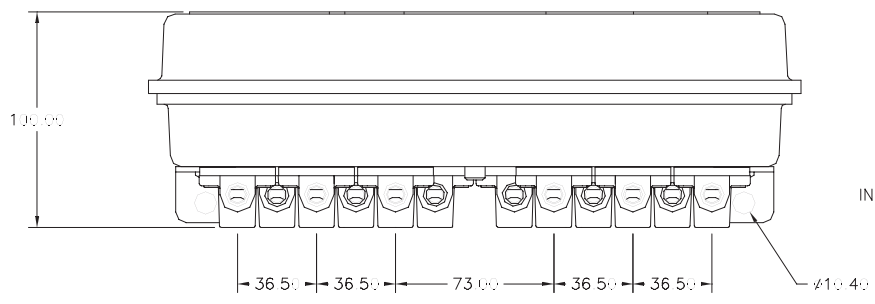
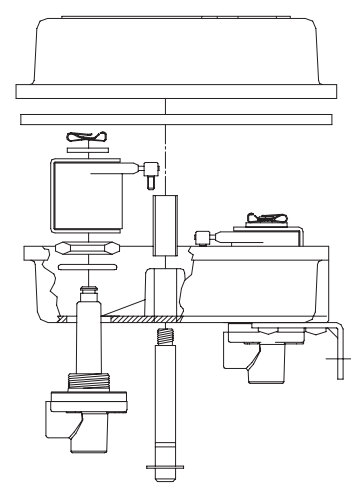
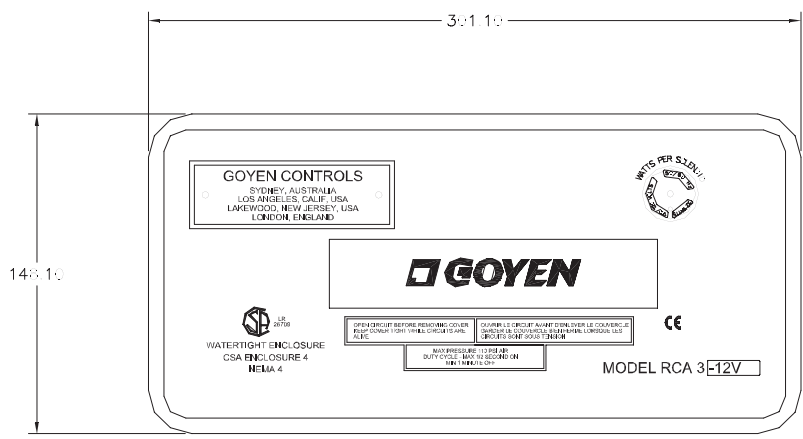
3-5V5 Series

Mass = 0.814 Kg + 0.174 Kg per valve pilot fitted
 (1.795 lb + 0.384 lb per pilot valve fitted)



3-8V8

Mass = 1.280 Kg + 0.174 Kg per pilot valve fitted
 (2.820 lb + 0.384 lb per pilot valve fitted)



3-12V12

Mass = 1.574 Kg + 0.174 Kg per pilot valve fitted
 (3.470 lb + 0.384 lb per pilot valve fitted)



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