

Kinetrol VLS/ULS Limit Switch Box

Offers a wide range of signalling options in a fully enclosed, corrosion resistant metal case. Available for direct mounting onto Kinetrol rotary actuators or discrete mounting via an industry standard VDI/VDE interface onto any make of rotary actuator. Easy to wire and set up with industrial standard robustness. Internally fitted options include AS Interface digital communication and a 4-20mA, 2-wire modulating angle retransmit circuit.

The range of switch and terminal arrangements includes 2 or 4 switches, extra connections allowing single point termination of wiring for limit switches and solenoid valves.

ATEX approved Ex d (Category 2) explosion proof and Ex ia intrinsically safe packages (Category 1). Integral sealed Clear Cone Monitor and red/green LED indicator options also give high visibility external visual indication of position.



Specification

Casing

Precision diecast aluminium alloy, switch option 003 Ex d diecast zinc alloy

Finish

Epoxy stove enamel

Seals

Nitrile rubber 'O' ring seals

Cable entry options

2 or 4 entries

M20 x 1.5 Conduit thread
or
½ NPS Conduit thread

4 Way plug DIN 43650A
(fits either conduit thread)

4 Way M12 Connector
(M20 Conduit thread only)



ATEX Up to Category 1

Options

- Discrete VDI/VDE (NAMUR) interface option for use with any industry standard rotary actuators
- Units sealed to IP67/NEMA 6 (ATEX units IP66/NEMA 4X, IP67 option available)
- Robust corrosion resistant epoxy painted diecast box
- Easy and accurate setting of switch position
- Available for direct mounting to Kinetrol models 03 to 15 (for minimum height)
Discrete Kinetrol 05 square drive insert for use with Kinetrol actuator models 16 to 60
- Quick access - No special tools required
- Two or four cable entries as standard to allow back wiring of solenoid valves
- Multiple switch options available for general and hazardous areas
- AS Interface bus circuit option inside box reads up to 4 switch inputs, drives up to 2 solenoids powered by bus only (see Kinetrol ASi Interface Bus Communication data sheet for more information)
- DeviceNet option inside box with various network speeds allows 2 on / off inputs and drives up to 2 solenoids (see Kinetrol DeviceNet Communications data sheet for more information)
- Optional Clear Cone monitor available
- Integral LED indicator lamps and angle retransmit circuit options are available

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LOAD RATINGS FOR STANDARD MICROSWITCHES (type 004)

Voltage	Resistive Load
125 V AC	15A
250 V AC	15A
up to 12 V DC	15A
up to 24 V DC	10A
up to 48 V DC	3A
up to 250 V DC	0.25A

MULTIPLICATION FACTORS FOR NON-RESISTIVE LOADS

Steady state tungsten lamp load	- x 0.1
Steady state inductive load	- x 0.2
Peak inductive load	- x 1.0

Weight

VLS	-	0.68 kg / 1.50 lb
ULS Switch Options		
003	-	1.40 kg / 3.09 lb

Temperature Range

Standard -20°C to +80°C (-4°F to +176°F)
 High Temp Seals up to 100°C (212°F)
 Also see switch temperatures

Switch Options

Switch Type 001

2 intrinsically safe 2 wire inductive proximity sensors for hazardous areas (ATEX CAT 1), normally closed.
 Ambient temperature range -20°C to +80°C (-4°F to +176°F)
 ATEX Monitor must be fitted

Switch Type 002

2 pneumatic switches with 4mm (5.32") push in fittings (ATEX CAT 2), normally closed.
 Ambient temperature range -15°C to +60°C (+5°F to +140°F)

Switch Type 003

Certificated unit to EEx ed II T6 for hazardous areas to Zone 1 (ATEX CAT 2) 2 x 3 wire switches for SPDT.
 Ambient temperature range -20°C to +70°C (-4°F to +158°F)

Switch Type 004

2 x 3 wire microswitches for SPDT.
 Ambient temperature range -40°C to +80°C (-40°F to +176°F)

Switch Type 005

2 x 2 wire proximity sensors 20-250 volts AC, 10-300 volts DC, normally open.
 Ambient temperature range -25°C to +70°C (-13°F to +158°F)

Switch Type 006

2 x 2 wire proximity sensors 5-60 volts DC, normally open, with LED switch status indicators.
 Ambient temperature range -20°C to +80°C (-4°F to +176°F)

Switch Type 007

4 x 3 wire microswitches for SPDT.
 Ambient temperature range -40°C to +80°C (-40°F to +176°F)

Switch Type 008

2 x 2 wire inductive slotted proximity sensors, normally closed.
 Ambient temperature range -20°C to +80°C (-4°F to +176°F)

Switch Type 009

2 x 3 wire gold plated contacts intrinsically safe microswitches for SPDT (ATEX CAT 1).
 Ambient temperature range -20°C to +80°C (-4°F to +176°F)
 ATEX Monitor must be fitted

Switch Type 00A

4 intrinsically safe 2 wire inductive proximity sensors for hazardous areas (ATEX CAT 1), normally closed.
 Ambient temperature range -20°C to +80°C (-4°F to +176°F)
 ATEX Monitor must be fitted

Switch Type 00D

4 x 3 wire gold plated contacts intrinsically safe microswitches for SPDT (ATEX CAT 1).
 Ambient temperature range -20°C to +80°C (-4°F to +176°F)
 ATEX Monitor must be fitted

Switch Type 00E

2 x 2 wire proximity sensors 20-140 volts AC / 10-140 volts DC.
 Ambient temperature range -25°C to +80°C (-13°F to +176°F)

Switch Type 00M

4 x 3 wire inductive proximity sensors 10-30 volts DC, normally open.
 Ambient temperature range -25°C to +70°C (-13°F to +158°F)

Switch Type 00N

2 x 3 wire inductive proximity sensors 10-30 volts DC, normally open.
 Ambient temperature range -25°C to +80°C (-13°F to +176°F)

Electronics Option B - E *

AS interface options are available with both the two and four entry Kinetrol VLS Limit Switch Box. Options B to E allow for different extended addressing options.

Electronics Option P *

Two or four way VLS Limit Switch Box fitted with potentiometer (20K ohms conductive plastic type).

Electronics Option R *

Two or four entry VLS Limit Switch Box fitted with angle retransmit, loop powered two wire circuit passes 4-20mA current, proportional to 0-90° position of actuator.

Electronics Option U (standard) *

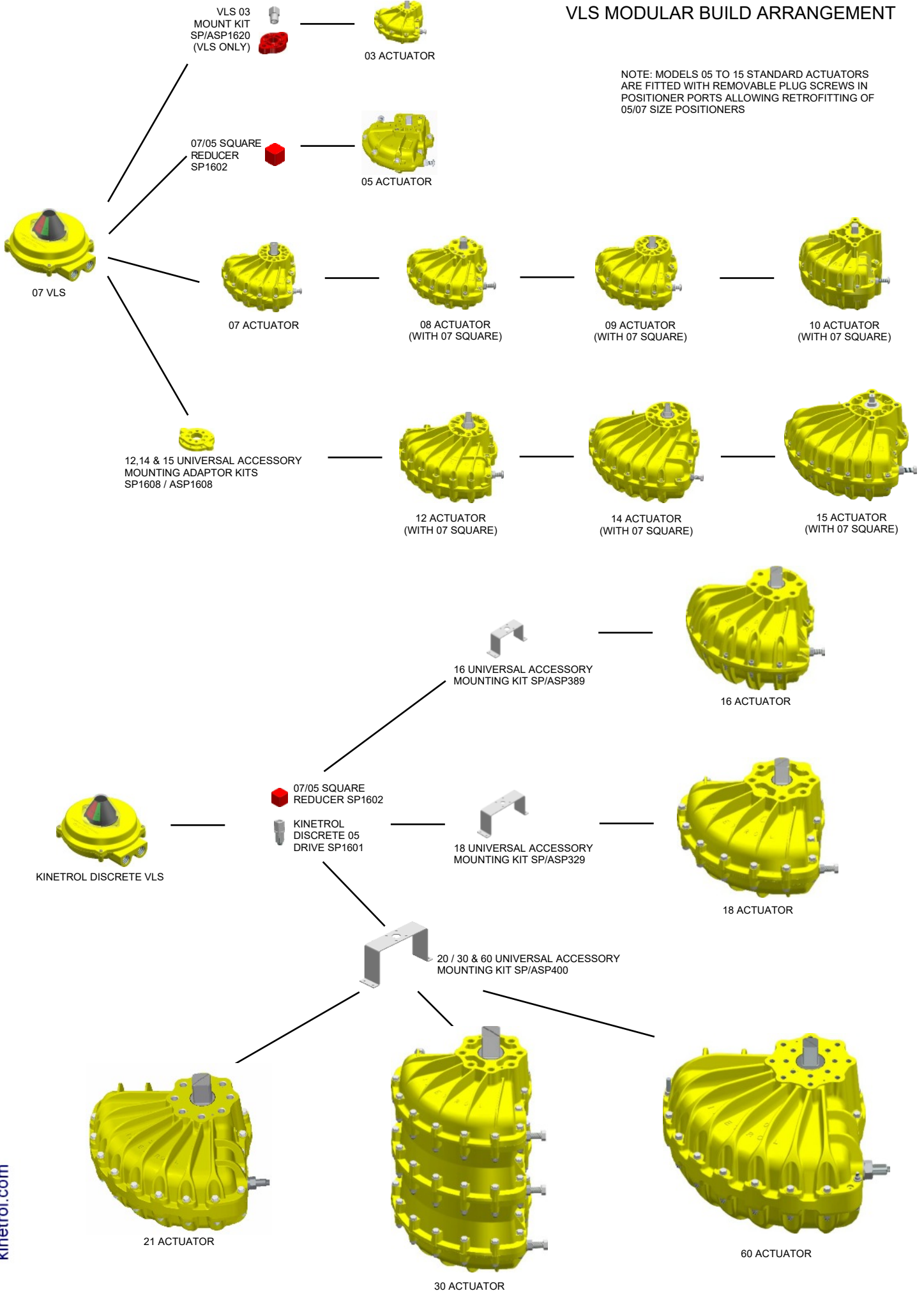
Two or four entry VLS Limit Switch Box without AS interface card, angle retransmit or potentiometer.

For ATEX ratings please refer to TD139

* For more details on Electronics options see Kinetrol Asi Interface Bus Communication data sheet

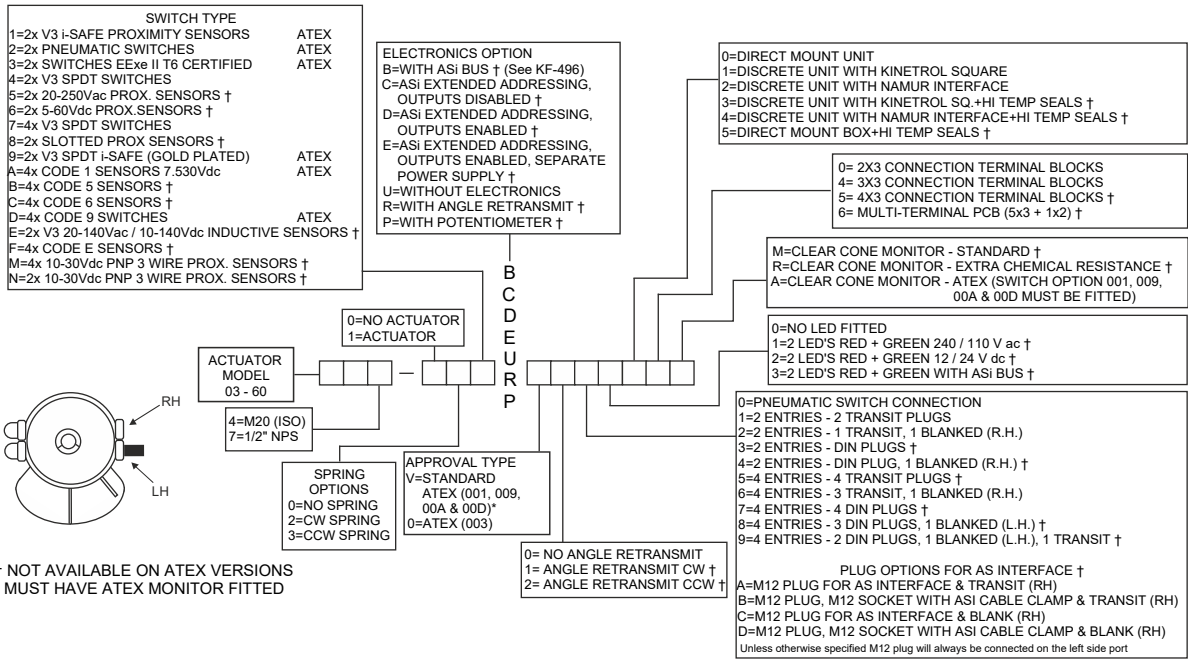
Kinetrol VLS/ULS Limit Switch Box

VLS MODULAR BUILD ARRANGEMENT



Kinetrol VLS/ULS Limit Switch Box

Ordering Codes

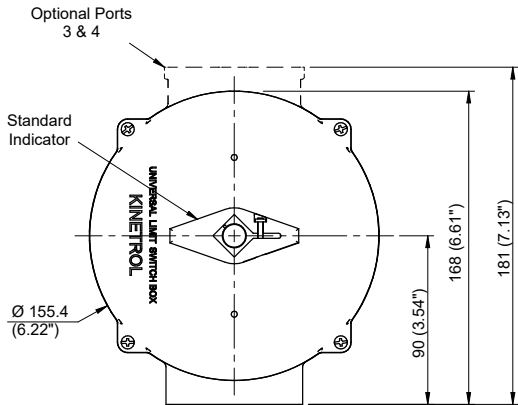


EXAMPLES:

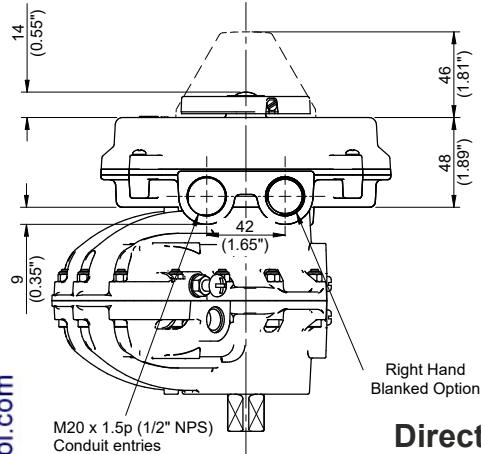
- 074-001UV01000A = 07 VLS BOX WITH 2 X V3 ISAFE PROXIMITY SENSORS, 2 TRANSIT PLUGS, 2 X 3 WAY TERMINALS, ATEX CLEAR CONE MONITOR, ATEX APPROVED
- 074-004UV1000 = 07 VLS BOX WITH 2 X V3 SPDT SWITCHES, 2 TRANSIT PLUGS, 2 X 3 WAY TERMINALS
- 074-004RV12000 = 07 VLS BOX WITH 2 X V3 SPDT SWITCHES, ANGLE RETRANSMIT CLOCKWISE, 1 X TRANSIT & 1 BLANKING PLUG, 2 X 3 WAY TERMINALS
- 094-124BV02000 = 09 SPRING RETURN CLOCKWISE ACTUATOR & VLS BOX WITH 2 X V3 SPDT SWITCHES, STANDARD ASI, 2 TRANSIT PLUGS, 2 X 3 WAY TERMINALS
- 094-109UV1000A = 09 DOUBLE ACTING ACTUATOR, VLS BOX WITH 2 X V3 ISAFE MECH. SWITCHES GOLD PLATED, 2 TRANSIT PLUGS, 2 X 3 WAY TERMINALS, ATEX CLEAR CONE MONITOR, ATEX APPROVED

Further switch options are available upon request-contact Kinetrol for details

Dimensions

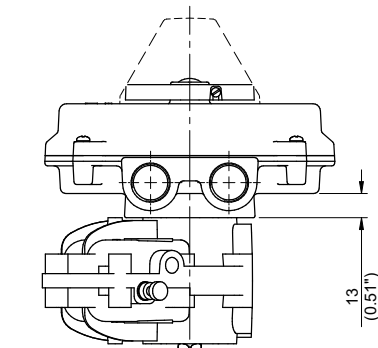


Standard Orientation Of Unit
Box Weight: 0.68 kg / 1.5 lb

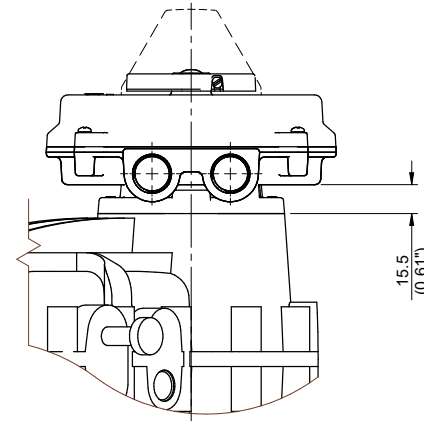


Direct Mount Option

07, 08, 09, 10
DIRECT MOUNT OPTION

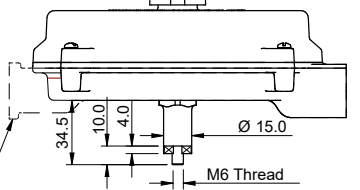
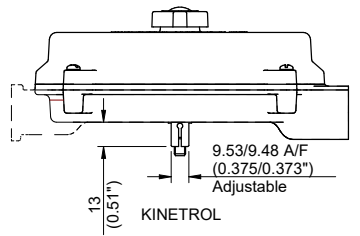


03 & 05
DIRECT MOUNT OPTION
ADDITIONAL ADAPTOR WEIGHT: 0.04 kg / 0.09 lb



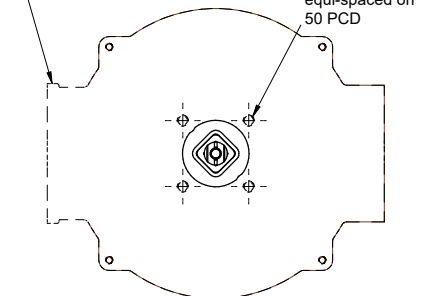
12, 14 & 15
DIRECT MOUNT OPTION
ADDITIONAL ADAPTOR WEIGHT: 0.56 kg

For ATEX ULS versions contact Kinetrol



Optional Ports 3 & 4

4 Mount Holes M6 x 5 deep equi-spaced on 50 PCD



Kinetrol & Namur Discrete Mount Option