ACTIVEMETAL™ KEYPADS
BEYOND DURABLE.™

WORRY-FREE ACCESS CONTROL WITH VANDAL-RESISTANT SOLID METAL KEYPADS FEATURING ACTIVETOUCH™ TOUCH THRU METAL TECHNOLOGY.

Packed with Features other Keypads Can't Match:

- Vandal-resistant, Solid Metal construction
- Weather, Water, Dust Resistant: one-piece, seamless construction — no moving keys
- Touch-Sensitive Activation: Selectable sensitivity and audio settings
- Output Options: Wiegand, Matrix, RS-232
- Solid-State Circuitry
- Washable / Submersible
- Customer Controlled LEDs (x2)
- Aesthetics: Raised Sculpted Keys, with permanent markings
- Auxiliary Output: Camera or Lighting activation
- Diagnostic and Real-time feedback
- Box or Panel / Under-panel mounting
- Limited Lifetime Product Warranty

Applications:

- Indoor / Outdoor Access Control
- Kiosks / Point of Sale
- Security / Alarm systems
- Keyless Entry Points
- Industrial / Commercial
- Gas Pumps
- ATM Machines
- Medical / Clean Rooms
- Prisons / Secured Facilities

ACTIVEMETAL™
ULTRA-RUGGED TOUCH SENSORS

Mechanical:

- Maximum Actuation Force: Level 2 Sensitivity, < 1.1 lbs. (5 N) ADA Compliant

- Material: Machined Aluminum with Powder Coated or Anodized Finish

- Mechanism: 100% Solid-state, No moving parts

- Operational Life: +20 million cycles

- Panel Mounting 0.50" screw penetration depth or through hole

- Torque: Panel mount 8-32 screw (17 Inch Pounds — max), Box mount 6-32 screw (8.5 Inch Pounds — max) Mounting fasteners NOT included.

- Sealing Washers and Gasket (included)

Electrical:

- Voltage: +9 VDC to +24 VDC

- Current Consumption: < 50mA (Max)

- ESD: Meets IEC 61000-4-2 spec to Level 4 Immunity

- Output: Wiegand, Matrix & RS-232

- Auxiliary Output: 30 VDC (Max), 100mA (Max)

- LEDs: 2 (customer controlled, 1 Green, 1 Red) Pull to ground

- Molex® 16-pin locking male connector (mates with Molex® 16-pin female connector part number 90142-0016, not included)

Environmental:

- Operating Temperature Range: -40° C to +85° C (Typical)

- Storage Temperature Range: -55° C to +125° C (Typical)

- Ingress Protection: IP68 (submerged in 3 meters for 30 minutes, when mounted)

- Shock: Drop test from 1.5 meters to concrete

- Vibration: Tested at 3 hours at 10g each Axis (no false actuations) MIL-STD-202G

- Impact: 2 ft-lb impact from a distance of 1.7 ft (per UL 294)

- Corrosion: 96 hours ASTM B117 Salt Fog Test

ASCII Serial Output

ASCII Output is for Matrix and Serial Keypads. The output is independent of the Legend Style (calculator or telephone).

3x4 ASCII Output

	Column 0	Column 1	Column 2
Row 0	0	1	2
Row 1	3	4	5
Row 2	6	7	8
Row 3	9	A	B

4x4 ASCII Output

	Column 0	Column 1	Column 2	Column 3
Row 0	0	1	2	3
Row 1	4	5	6	7
Row 2	8	9	A	B
Row 3	C	D	E	F

RoHS COMPLIANT 2002 / 95 / EC

IEC IP68 COMPLIANT

FC VERIFICATION

Design and specifications subject to change without notice due to continuing product improvements

ACTIVEMETAL™
ULTRA-RUGGED TOUCH SENSORS

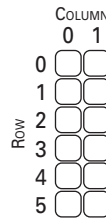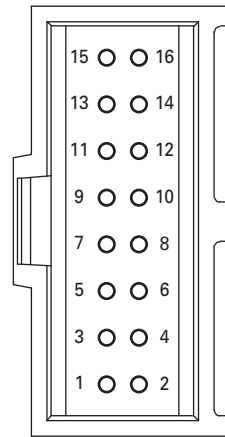**800.544.3354** • *www.ActiveMetal.com*

Pin-Out Configurations:

Pin No.	RS-232	Wiegand
1	+9 to 24 VDC	+9 to 24 VDC
2	Aux. Out	Aux. Out
3	TX Data	—
4	—	—
5	—	Data 0
6	—	Data 1
7	—	—
8	—	—
9	—	—
10	—	—
11	—	—
12	—	—
13	Red LED*	Red LED*
14	Green LED*	Green LED*
15	Ground	Ground
16	Ground	Ground

Diagrams

COLUMN 0 1
Row 0 1 2 3 4 5

* Please note, the Red and Green LED's are externally controlled by pulling to ground.

Back view

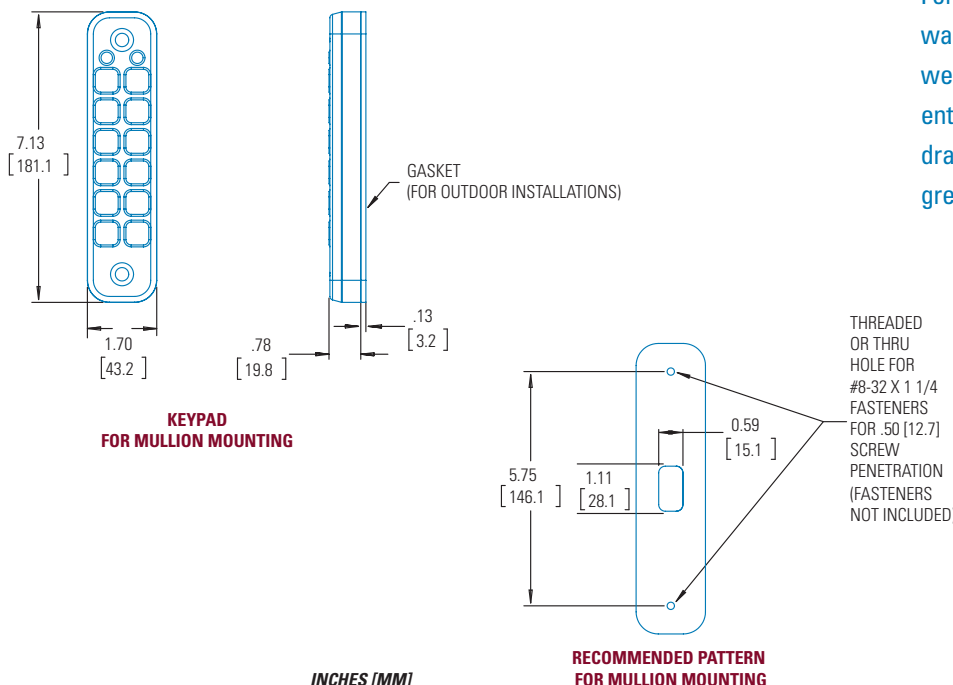*(mates with Molex® 16-pin female connector part number 90142-0016, not included)*

Sensitivity and Audio Settings:

Within the first 8 seconds after power up, press one of the following keys (see Key Map above) to select the sensitivity and audio settings. If one of these keys are not pressed during the first 8 seconds after power up, the last setting prior to power down will be used.

Row 0, Column 0 — Low sensitivity (heavier touch), Sound On

Row 1, Column 0 — Med sensitivity (standard touch), Sound On**

Row 2, Column 0 — High sensitivity (lighter touch), Sound On

Row 0, Column 1 — Low sensitivity (heavier touch), Sound Off

Row 1, Column 1 — Med sensitivity (standard touch), Sound Off

Row 2, Column 1 — High sensitivity (lighter touch), Sound Off

** Default Setting

Dimensions / Mounting Diagrams:

7.13 [181.1]
1.70 [43.2]

KEYPAD FOR MULLION MOUNTING

GASKET (FOR OUTDOOR INSTALLATIONS)

.78 [19.8]
.13 [3.2]

For outdoor installations use the sealing washers and gasket (provided), and a weatherproof backbox, seal the wire entry locations with silicone and provide a drain hole. In addition, use anti-oxidant grease for wire harness connections.

5.75 [146.1]
1.11 [28.1]
0.59 [15.1]

THREADED OR THRU HOLE FOR #8-32 X 1 1/4 FASTENERS FOR .50 [12.7] SCREW PENETRATION (FASTENERS NOT INCLUDED)

INCHES [MM]

RECOMMENDED PATTERN FOR MULLION MOUNTING

Design and specifications subject to change without notice due to continuing product improvements

Pin-Out Configurations:

Pin No.	Matrix	RS-232	Wiegand
1	+9 to 24 VDC	+9 to 24 VDC	+9 to 24 VDC
2	Aux. Out	Aux. Out	Aux. Out
3	—	TX Data	—
4	—	—	—
5	Row 0	—	Data 0
6	Row 1	—	Data 1
7	Row 2	—	—
8	Row 3	—	—
9	Column 0	—	—
10	Column 1	—	—
11	Column 2	—	—
12	—	—	—
13	Red LED*	Red LED*	Red LED*
14	Green LED*	Green LED*	Green LED*
15	Ground	Ground	Ground
16	Ground	Ground	Ground

Please note, the Red and Green LED's are externally controlled by pulling to ground.

Diagrams

```
15 ○ ○ 16
13 ○ ○ 14
11 ○ ○ 12
 9 ○ ○ 10
 7 ○ ○  8
 5 ○ ○  6
 3 ○ ○  4
 1 ○ ○  2
```

COLUMN
```
      0  1  2
   0 □ □ □
ROW 1 □ □ □
   2 □ □ □
   3 □ □ □
```

Back view

(mates with Molex® 16-pin female connector part number 90142-0016, not included)

Sensitivity and Audio Settings:

Within the first 8 seconds after power up, press one of the following keys (see Key Map above) to select the sensitivity and audio settings. If one of these keys are not pressed during the first 8 seconds after power up, the last setting prior to power down will be used.

Row 0, Column 0 — Low sensitivity (heavier touch), Sound On   **Row 1, Column 0** — Low sensitivity (heavier touch), Sound Off

Row 0, Column 1 — Med sensitivity (standard touch), Sound On**   **Row 1, Column 1** — Med sensitivity (standard touch), Sound Off

Row 0, Column 2 — High sensitivity (lighter touch), Sound On   **Row 1, Column 2** — High sensitivity (lighter touch), Sound Off
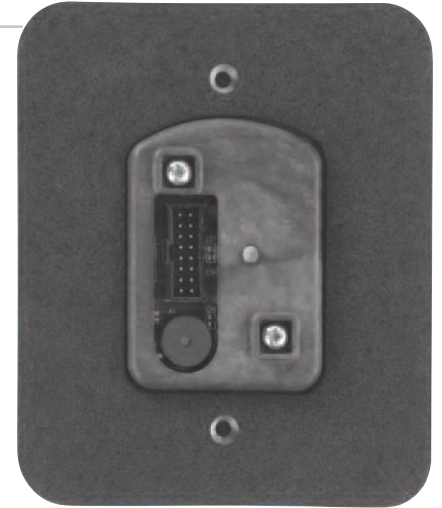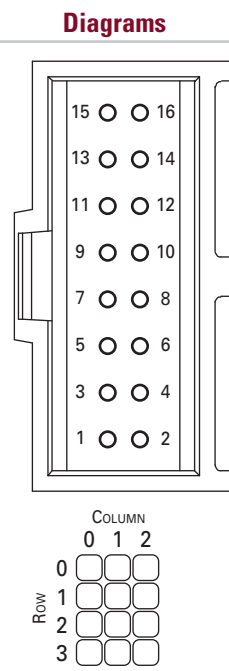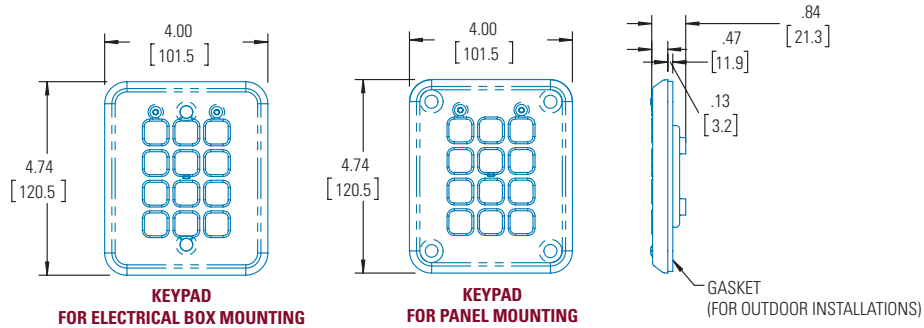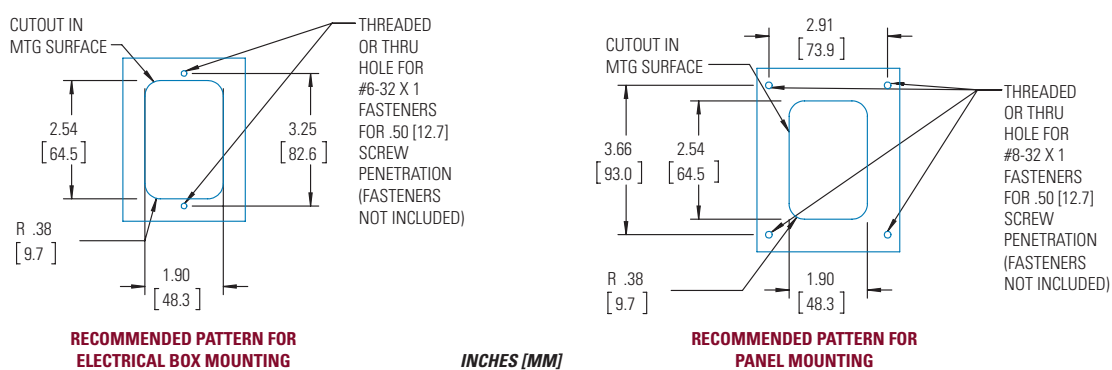
*** Default Setting*

Dimensions / Mounting Diagrams:

4.00 [101.5]
4.74 [120.5]

KEYPAD FOR ELECTRICAL BOX MOUNTING

4.00 [101.5]
4.74 [120.5]

KEYPAD FOR PANEL MOUNTING

.84 [21.3]
.47 [11.9]
.13 [3.2]

GASKET (FOR OUTDOOR INSTALLATIONS)

For outdoor installations use the sealing washers and gasket (provided), and a weatherproof backbox, seal the wire entry locations with silicone and provide a drain hole. In addition, use anti-oxidant grease for wire harness connections.

CUTOUT IN MTG SURFACE
THREADED OR THRU HOLE FOR #6-32 X 1 FASTENERS FOR .50 [12.7] SCREW PENETRATION (FASTENERS NOT INCLUDED)
2.54 [64.5]
3.25 [82.6]
R .38 [9.7]
1.90 [48.3]

RECOMMENDED PATTERN FOR ELECTRICAL BOX MOUNTING

INCHES [MM]

CUTOUT IN MTG SURFACE
2.91 [73.9]
THREADED OR THRU HOLE FOR #8-32 X 1 FASTENERS FOR .50 [12.7] SCREW PENETRATION (FASTENERS NOT INCLUDED)
3.66 [93.0]
2.54 [64.5]
R .38 [9.7]
1.90 [48.3]

RECOMMENDED PATTERN FOR PANEL MOUNTING

800.544.3354
www.ActiveMetal.com

Pin-Out Configurations:

Pin No.	Matrix	RS-232	Wiegand
1	+9 to 24 VDC	+9 to 24 VDC	+9 to 24 VDC
2	Aux. Out	Aux. Out	Aux. Out
3	—	TX Data	—
4	—	—	—
5	Row 0	—	Data 0
6	Row 1	—	Data 1
7	Row 2	—	—
8	Row 3	—	—
9	Column 0	—	—
10	Column 1	—	—
11	Column 2	—	—
12	Column 3	—	—
13	Red LED*	Red LED*	Red LED*
14	Green LED*	Green LED*	Green LED*
15	Ground	Ground	Ground
16	Ground	Ground	Ground

Please note, the Red and Green LED's are externally controlled by pulling to ground.

Diagrams

COLUMN
0 1 2 3 / ROW 0 1 2 3 (Key Map)

Back view

(mates with Molex® 16-pin female connector part number 90142-0016, not included)

Sensitivity and Audio Settings:

Within the first 8 seconds after power up, press one of the following keys (see Key Map above) to select the sensitivity and audio settings. If one of these keys are not pressed during the first 8 seconds after power up, the last setting prior to power down will be used.

Row 0, Column 0 — Low sensitivity (heavier touch), Sound On   **Row 1, Column 0** — Low sensitivity (heavier touch), Sound Off

Row 0, Column 1 — Med sensitivity (standard touch), Sound On**   **Row 1, Column 1** — Med sensitivity (standard touch), Sound Off

Row 0, Column 2 — High sensitivity (lighter touch), Sound On   **Row 1, Column 2** — High sensitivity (lighter touch), Sound Off

*** Default Setting*

Dimensions / Mounting Diagrams:

4.74 [120.5]
4.74 [120.5]

KEYPAD FOR ELECTRICAL BOX MOUNTING

4.74 [120.5]
4.74 [120.5]

KEYPAD FOR PANEL MOUNTING

.84 [21.3]
.39 [10.0]
.13 [3.2]
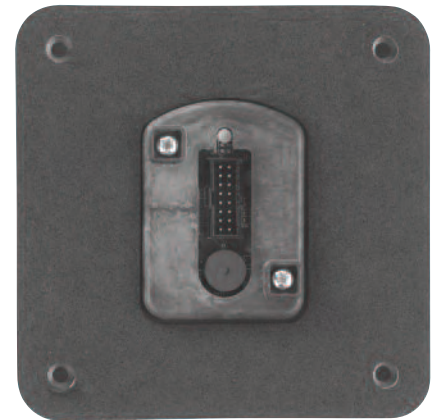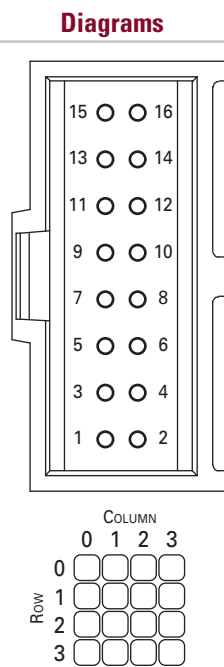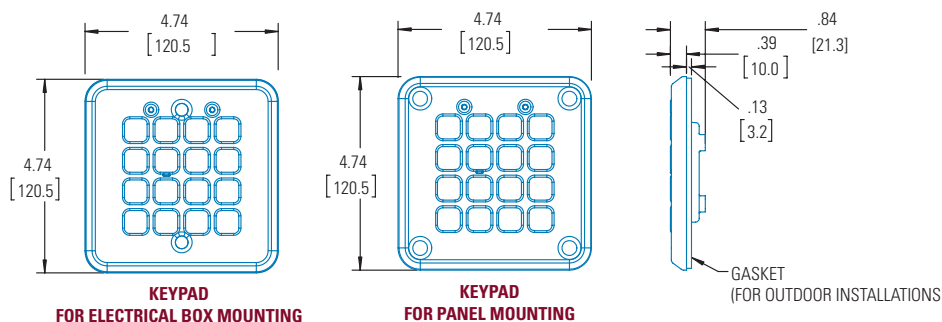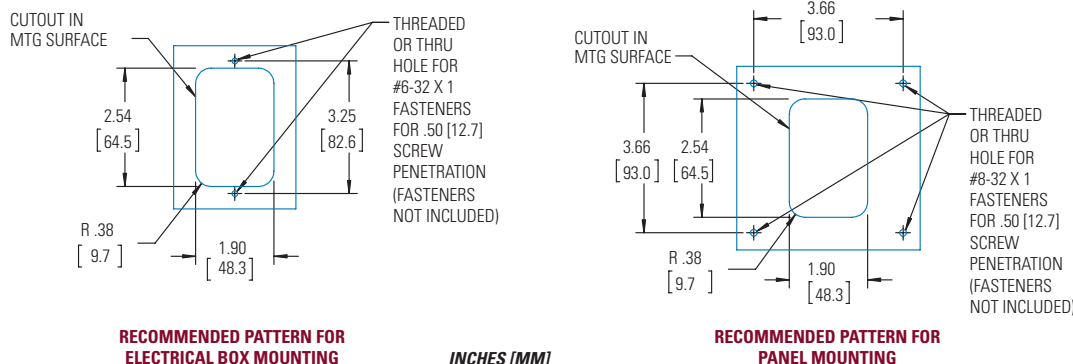
GASKET (FOR OUTDOOR INSTALLATIONS)

For outdoor installations use the sealing washers and gasket (provided), and a weatherproof backbox, seal the wire entry locations with silicone and provide a drain hole. In addition, use anti-oxidant grease for wire harness connections.

CUTOUT IN MTG SURFACE

THREADED OR THRU HOLE FOR #6-32 X 1 FASTENERS FOR .50 [12.7] SCREW PENETRATION (FASTENERS NOT INCLUDED)

2.54 [64.5]
3.25 [82.6]
R .38 [9.7]
1.90 [48.3]

RECOMMENDED PATTERN FOR ELECTRICAL BOX MOUNTING

INCHES [MM]

CUTOUT IN MTG SURFACE

3.66 [93.0]
3.66 [93.0]
2.54 [64.5]
R .38 [9.7]
1.90 [48.3]

THREADED OR THRU HOLE FOR #8-32 X 1 FASTENERS FOR .50 [12.7] SCREW PENETRATION (FASTENERS NOT INCLUDED)

RECOMMENDED PATTERN FOR PANEL MOUNTING

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ORDERING INFORMATION
Raised Profile Keypads

The ActiveMetal keypads have many configurable options and over 280 part numbers. Please use the Matrix below to configure the keypad that is right for your application. Not all options and configurations are possible, please contact an authorized distributor or the factory for help configuring your part.
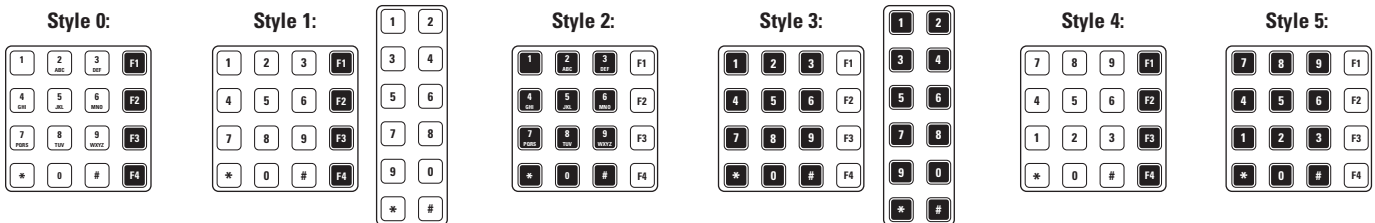
PART NUMBER MATRIX

T10-10☐☐☐☐-☐☐☐

ActiveMetal Keypad

Profile
10 = Raised

Key Layout
34 = 3 x 4
44 = 4 x 4
26 = 2 x 6 [4]

Mounting Method
0 = Panel-mount (4-holes)
1 = Box-mount (2-holes)
2 = Mullion-mount (2-holes) [4]

Output
0 = Matrix
1 = Serial
2 = Wiegand (8-bit)
3 = Wiegand (26-bit) [5]

Legend
0 = Style 0
1 = Style 1
2 = Style 2
3 = Style 3
4 = Style 4
5 = Style 5
9 = Custom [1]

Material
0 = Aluminum

Finish
0 = Light Gray [2]
1 = Clear [3]
2 = Black [3]
3 = Blue [3]

[1] Custom legend available only on anodized finishes (Clear, Back or Blue).

[2] Available with powder coat finish only.

[3] Available with anodized finish only.

[4] Available in legend style 1 or style 3, Mullion-Mount, either Serial or Wiegand output and in Clear or Black finishes only.

[5] Available with 2 x 6 or 3 x 4 Keypads only.

Standard Markings:

Style 0: Style 1: Style 2: Style 3: Style 4: Style 5:

Additional Information:

4x4 and 2x6 legends are depicted above, 3x4 legends do not have the 4 function keys on the right.

Panel Mount — Mounts using 4 screws to a flat surface or can be under-panel mounted for a flush low profile look. (Under-panel mounting requires separate gasket, not included).

Box Mount — Mounts using 2 screws to a standard single gang electrical box.

Mullion Mount — Mounts using 2 screws to the vertical member of a frame of a door or window.

Matrix Output — Standard row and column switch outputs, plus an auxiliary output and two customer controlled LED inputs.

Serial Output — 3-wire connection for RS-232 serial protocol, plus an auxiliary output and two customer controlled LED inputs.

Wiegand Output — 4-wire connection for 8-bit or 26-bit Wiegand protocol plus an auxiliary output and two customer controlled LED inputs.

Legends — 6 options available: ascending numbers (telephone) descending numbers (calculator), with or without lettering, and positive or negative images. (see pictures above ans website for examples).

Material — Aluminum either a powder coat finish (Light Gray) or an anodized finish (Clear, Black or Blue).