

Input: True RMS 0-40 mVAC to 0-300 VAC, 0-4 mAAC to 0-200 mAAC
Output: 0-1 V to 0-10 VDC, ±5 VDC, ±10 VDC, 0-2 mA to 20 mADC

- One Minute Setup for Hundreds of I/O Ranges
- External Switches & Tables for Range Selection
- Removable Plugs for Faster Installation
- Full 1200 V Input/Output/Power Isolation
- Input and Output LoopTracker® LEDs
- Output Test Button
- Built-In Loop Power Supply for Sink/Source Output

Applications

- Convert, Boost, and Rescale Process Signals
- Isolate Single-Ended (Common Ground) PLC Inputs
- Interface Process Signals with Panel Meters, PLCs, Recorders, Data Acquisition, DCS, & SCADA Systems

Input Ranges

Field selectable ranges via switch settings
 Voltage: 0-40 mVAC to 0-300 VAC
 Current: 0-4 mAAC to 0-200 mAAC
 Measurements are true RMS

Input Impedance

Voltage (0-4 VAC): 1 MΩ minimum
 Voltage (>4 VAC): 220 kΩ minimum
 Current: 10 Ω typical

Input Frequency

40 Hz to 1000 Hz sinusoidal

LoopTracker

Variable brightness LEDs indicate I/O loop level and status

Output Ranges

Switch selectable, field rangeable
 Voltage: 0-1 VDC to 0-10 VDC, 10 mA max
 Bipolar Voltage: ±1 VDC to ±10 VDC
 Current: 0-2 mADC to 0-25 mADC
 20 V compliance, 1000 Ω at 20 mA
 Output offset: ±100% in 15% increments

Output Linearity

Better than ±0.1% of span

Output Zero and Span

Multi-turn potentiometers to compensate for load and lead variations, ±15% of span adjustment range typical

Output Loop Power Supply

20 VDC nominal, regulated, 25 mADC
 Max. ripple, less than 10 mVRMS
 May be selectively wired for sinking or sourcing mA output

Output Ripple and Noise

Less than 10 mVRMS

Functional Test

Front button sets output to test level when pressed
 Potentiometer adjustable 0-100% of span

Response Time

200 milliseconds typical (0-90%)

Common Mode Rejection

120 dB minimum

Isolation

1200 VRMS minimum
 Full isolation: power to input, power to output, input to output

Ambient Temperature Range and Stability

-10°C to +60°C operating ambient
 Better than ±0.02% of span per °C stability

Power

80-265 VAC or 48-300 VDC, 2 W maximum
 D versions: 9-30 VDC or 10-32 VAC 50/60 Hz, 2 W maximum

Housing

Mounts to standard 35 mm DIN rail
 IP 40

Connectors

Four 4-terminal removable connectors
 14 AWG max wire size



Dimensions
 0.89" W x 4.62" H x 4.81" D
 22.5 mm W x 117 mm H x 122 mm D
 Height includes connectors

Description

The APD 6380 accepts an AC voltage or current input and provides an optically isolated DC voltage or current output that is linearly related to the input.

Typical applications include signal isolation, conversion, boosting or a combination of the three. Full 3-way isolation (input, output, power) makes this module useful for ground loop elimination, common mode signal rejection or noise pickup reduction.

Sink/Source Output Versatility

For maximum versatility a milliamp output can be selectively wired for sinking or sourcing. This allows the APD 6380 milliamp output to connect to a powered or unpowered current loop. The 20 VDC output loop supply can be used to power a passive mA device if required.

How to Order

All models are field rangeable. Please specify Model APD 6380 or APD 6380 D for operation on low voltage power Order options and accessories as required



- Connect Sink or Source mA Output
- Adjustable Output Offset
- Output LoopTracker LED
- Output Test Function
- Front Zero and Span
- Input LoopTracker LED
- Hundreds of Range Selections

Removable Plugs

Actual Size

LoopTracker

API exclusive features include two LoopTracker LEDs (green for input, red for output) that vary in intensity with changes in the process input and output signals. These provide a quick visual picture of your process loop at all times and can greatly aid in saving time during initial startup and/or troubleshooting.

Output Test

An API exclusive feature includes the test button to provide a fixed output (independent of the input) when held depressed. The test output level is potentiometer adjustable from 0 to 100% of output span. The output test button greatly aids in saving time during initial startup and/or troubleshooting.

I/O can be pre-set to your specifications. Please provide

Input range
 Output range

| Model | Input | Output | Power |
|------------|--|--|--------------------------|
| APD 6380 | Field configurable—specify range if factory is to set switches | Field configurable—specify range if factory is to set switches | 80-265 VAC or 48-300 VDC |
| APD 6380 D | | | 9-30 VDC or 10-32 VAC |

Options—add to end of model number

- M01** Output reversal, such as 20-4 mA output
- U** Conformal coating for moisture resistance

Accessories—order as separate line item

- API TK36** DIN rail, 35 mm W x 39" L, aluminum
- API BP4** Spare removable 4 terminal plug, black

Range Selection

See table below (voltage inputs) and on the next page (current inputs) to select I/O ranges for your application. It is generally easier to select ranges before installation.

See the model/serial number label for module information, options, or if a custom range was specified.

The module side label lists common ranges.

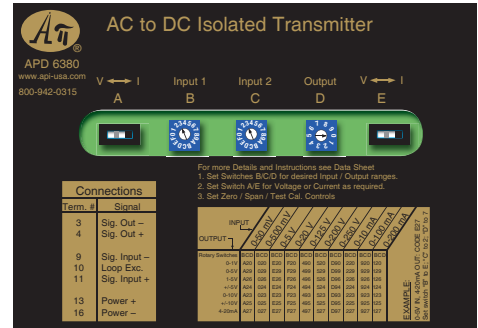
For ranges not listed here or for ranges that fall between the listed ranges see api-usa.com/APD6380 and download [apd6380ranges.pdf](#) for the complete range table.

It may also be possible to use the next highest setting and trim the output signal with the zero and span potentiometers.

APD 6380 Voltage Input Range Selection

- Switch A: Set to "V" for voltage input
- Switch B: Input range
- Switch C: Input range
- Switch D: Output range
- Switch E: Set to "V" for voltage output or "I" for current output

Note that when using a current shunt input, it measures a mV drop across a fixed resistance, typically 50 mV, 75 mV or 100 mV. The correct input setting would be the appropriate mV range for the shunt.



| Output | 0-1 V | 0-2 V | 0-4 V | 1-5 V | 0-5 V | 0-8 V | 2-10 V | 0-10 V | ±5 V | ±10 V | 0-2 mA | 0-4 mA | 0-8 mA | 2-10 mA | 0-10 mA | 0-16 mA | 4-20 mA | 0-20 mA |
|-----------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|--------|--------|--------|---------|---------|---------|---------|---------|
| Switches | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE |
| Input | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE |
| 0-40 mV | VA60V | VA68V | VA61V | VA66V | VA69V | VA62V | VA67V | VA63V | VA64V | VA65V | VA60I | VA68I | VA61I | VA66I | VA69I | VA62I | VA67I | VA63I |
| 0-50 mV | VA20V | VA28V | VA21V | VA26V | VA29V | VA22V | VA27V | VA23V | VA24V | VA25V | VA20I | VA28I | VA21I | VA26I | VA29I | VA22I | VA27I | VA23I |
| 0-75 mV | V2E0V | V2E8V | V2E1V | V2E6V | V2E9V | V2E2V | V2E7V | V2E3V | V2E4V | V2E5V | V2E0I | V2E8I | V2E1I | V2E6I | V2E9I | V2E2I | V2E7I | V2E3I |
| 0-80 mV | V260V | V268V | V261V | V266V | V269V | V262V | V267V | V263V | V264V | V265V | V260I | V268I | V261I | V266I | V269I | V262I | V267I | V263I |
| 0-100 mV | V220V | V228V | V221V | V226V | V229V | V222V | V227V | V223V | V224V | V225V | V220I | V228I | V221I | V226I | V229I | V222I | V227I | V223I |
| 0-130 mV | VA50V | VA58V | VA51V | VA56V | VA59V | VA52V | VA57V | VA53V | VA54V | VA55V | VA50I | VA58I | VA51I | VA56I | VA59I | VA52I | VA57I | VA53I |
| 0-160 mV | VB60V | VB68V | VB61V | VB66V | VB69V | VB62V | VB67V | VB63V | VB64V | VB65V | VB60I | VB68I | VB61I | VB66I | VB69I | VB62I | VB67I | VB63I |
| 0-200 mV | VB20V | VB28V | VB21V | VB26V | VB29V | VB22V | VB27V | VB23V | VB24V | VB25V | VB20I | VB28I | VB21I | VB26I | VB29I | VB22I | VB27I | VB23I |
| 0-250 mV | V820V | V828V | V821V | V826V | V829V | V822V | V827V | V823V | V824V | V825V | V820I | V828I | V821I | V826I | V829I | V822I | V827I | V823I |
| 0-260 mV | V250V | V258V | V251V | V256V | V259V | V252V | V257V | V253V | V254V | V255V | V250I | V258I | V251I | V256I | V259I | V252I | V257I | V253I |
| 0-300 mV | V230V | V238V | V231V | V236V | V239V | V232V | V237V | V233V | V234V | V235V | V230I | V238I | V231I | V236I | V239I | V232I | V237I | V233I |
| 0-320 mV | V360V | V368V | V361V | V366V | V369V | V362V | V367V | V363V | V364V | V365V | V360I | V368I | V361I | V366I | V369I | V362I | V367I | V363I |
| 0-375 mV | VOE0V | VOE8V | VOE1V | VOE6V | VOE9V | VOE2V | VOE7V | VOE3V | VOE4V | VOE5V | VOE0I | VOE8I | VOE1I | VOE6I | VOE9I | VOE2I | VOE7I | VOE3I |
| 0-400 mV | VO60V | VO68V | VO61V | VO66V | VO69V | VO62V | VO67V | VO63V | VO64V | VO65V | VO60I | VO68I | VO61I | VO66I | VO69I | VO62I | VO67I | VO63I |
| 0-500 mV | VO20V | VO28V | VO21V | VO26V | VO29V | VO22V | VO27V | VO23V | VO24V | VO25V | VO20I | VO28I | VO21I | VO26I | VO29I | VO22I | VO27I | VO23I |
| 0-560 mV | V8F0V | V8F8V | V8F1V | V8F6V | V8F9V | V8F2V | V8F7V | V8F3V | V8F4V | V8F5V | V8F0I | V8F8I | V8F1I | V8F6I | V8F9I | V8F2I | V8F7I | V8F3I |
| 0-650 mV | V850V | V858V | V851V | V856V | V859V | V852V | V857V | V853V | V854V | V855V | V850I | V858I | V851I | V856I | V859I | V852I | V857I | V853I |
| 0-750 mV | V830V | V838V | V831V | V836V | V839V | V832V | V837V | V833V | V834V | V835V | V830I | V838I | V831I | V836I | V839I | V832I | V837I | V833I |
| 0-800 mV | V960V | V968V | V961V | V966V | V969V | V962V | V967V | V963V | V964V | V965V | V960I | V968I | V961I | V966I | V969I | V962I | V967I | V963I |
| 0-900 mV | V3F0V | V3F8V | V3F1V | V3F6V | V3F9V | V3F2V | V3F7V | V3F3V | V3F4V | V3F5V | V3F0I | V3F8I | V3F1I | V3F6I | V3F9I | V3F2I | V3F7I | V3F3I |
| 0-1 V | V920V | V928V | V921V | V926V | V929V | V922V | V927V | V923V | V924V | V925V | V920I | V928I | V921I | V926I | V929I | V922I | V927I | V923I |
| 0-1.125 V | VOF0V | VOF8V | VOF1V | VOF6V | VOF9V | VOF2V | VOF7V | VOF3V | VOF4V | VOF5V | VOF0I | VOF8I | VOF1I | VOF6I | VOF9I | VOF2I | VOF7I | VOF3I |
| 0-1.5 V | VO30V | VO38V | VO31V | VO36V | VO39V | VO32V | VO37V | VO33V | VO34V | VO35V | VO30I | VO38I | VO31I | VO36I | VO39I | VO32I | VO37I | VO33I |
| 0-1.75 V | V140V | V148V | V141V | V146V | V149V | V142V | V147V | V143V | V144V | V145V | V140I | V148I | V141I | V146I | V149I | V142I | V147I | V143I |
| 0-2 V | V120V | V128V | V121V | V126V | V129V | V122V | V127V | V123V | V124V | V125V | V120I | V128I | V121I | V126I | V129I | V122I | V127I | V123I |
| 0-2.5 V | V990V | V998V | V991V | V996V | V999V | V992V | V997V | V993V | V994V | V995V | V990I | V998I | V991I | V996I | V999I | V992I | V997I | V993I |
| 0-3 V | V930V | V938V | V931V | V936V | V939V | V932V | V937V | V933V | V934V | V935V | V930I | V938I | V931I | V936I | V939I | V932I | V937I | V933I |
| 0-4 V | VE60V | VE68V | VE61V | VE66V | VE69V | VE62V | VE67V | VE63V | VE64V | VE65V | VE60I | VE68I | VE61I | VE66I | VE69I | VE62I | VE67I | VE63I |
| 0-5 V | VE20V | VE28V | VE21V | VE26V | VE29V | VE22V | VE27V | VE23V | VE24V | VE25V | VE20I | VE28I | VE21I | VE26I | VE29I | VE22I | VE27I | VE23I |
| 0-7.5 V | V6E0V | V6E8V | V6E1V | V6E6V | V6E9V | V6E2V | V6E7V | V6E3V | V6E4V | V6E5V | V6E0I | V6E8I | V6E1I | V6E6I | V6E9I | V6E2I | V6E7I | V6E3I |
| 0-10 V | V620V | V628V | V621V | V626V | V629V | V622V | V627V | V623V | V624V | V625V | V620I | V628I | V621I | V626I | V629I | V622I | V627I | V623I |
| 0-15 V | VE30V | VE38V | VE31V | VE36V | VE39V | VE32V | VE37V | VE33V | VE34V | VE35V | VE30I | VE38I | VE31I | VE36I | VE39I | VE32I | VE37I | VE33I |
| 0-20 V | VF20V | VF28V | VF21V | VF26V | VF29V | VF22V | VF27V | VF23V | VF24V | VF25V | VF20I | VF28I | VF21I | VF26I | VF29I | VF22I | VF27I | VF23I |
| 0-25 V | VC20V | VC28V | VC21V | VC26V | VC29V | VC22V | VC27V | VC23V | VC24V | VC25V | VC20I | VC28I | VC21I | VC26I | VC29I | VC22I | VC27I | VC23I |
| 0-40 V | V460V | V468V | V461V | V466V | V469V | V462V | V467V | V463V | V464V | V465V | V460I | V468I | V461I | V466I | V469I | V462I | V467I | V463I |
| 0-50 V | V420V | V428V | V421V | V426V | V429V | V422V | V427V | V423V | V424V | V425V | V420I | V428I | V421I | V426I | V429I | V422I | V427I | V423I |
| 0-60 V | VF30V | VF38V | VF31V | VF36V | VF39V | VF32V | VF37V | VF33V | VF34V | VF35V | VF30I | VF38I | VF31I | VF36I | VF39I | VF32I | VF37I | VF33I |
| 0-75 V | VC30V | VC38V | VC31V | VC36V | VC39V | VC32V | VC37V | VC33V | VC34V | VC35V | VC30I | VC38I | VC31I | VC36I | VC39I | VC32I | VC37I | VC33I |
| 0-90 V | V7F0V | V7F8V | V7F1V | V7F6V | V7F9V | V7F2V | V7F7V | V7F3V | V7F4V | V7F5V | V7F0I | V7F8I | V7F1I | V7F6I | V7F9I | V7F2I | V7F7I | V7F3I |
| 0-100 V | VD20V | VD28V | VD21V | VD26V | VD29V | VD22V | VD27V | VD23V | VD24V | VD25V | VD20I | VD28I | VD21I | VD26I | VD29I | VD22I | VD27I | VD23I |
| 0-117 V | V4B0V | V4B8V | V4B1V | V4B6V | V4B9V | V4B2V | V4B7V | V4B3V | V4B4V | V4B5V | V4B0I | V4B8I | V4B1I | V4B6I | V4B9I | V4B2I | V4B7I | V4B3I |
| 0-120 V | V470V | V478V | V471V | V476V | V479V | V472V | V477V | V473V | V474V | V475V | V470I | V478I | V471I | V476I | V479I | V472I | V477I | V473I |
| 0-125 V | V490V | V498V | V491V | V496V | V499V | V492V | V497V | V493V | V494V | V495V | V490I | V498I | V491I | V496I | V499I | V492I | V497I | V493I |
| 0-175 V | V540V | V548V | V541V | V546V | V549V | V542V | V547V | V543V | V544V | V545V | V540I | V548I | V541I | V546I | V549I | V542I | V547I | V543I |
| 0-200 V | V520V | V528V | V521V | V526V | V529V | V522V | V527V | V523V | V524V | V525V | V520I | V528I | V521I | V526I | V529I | V522I | V527I | V523I |
| 0-250 V | VD90V | VD98V | VD91V | VD96V | VD99V | VD92V | VD97V | VD93V | VD94V | VD95V | VD90I | VD98I | VD91I | VD96I | VD99I | VD92I | VD97I | VD93I |
| 0-260 V | VD50V | VD58V | VD51V | VD56V | VD59V | VD52V | VD57V | VD53V | VD54V | VD55V | VD50I | VD58I | VD51I | VD56I | VD59I | VD52I | VD57I | VD53I |
| 0-300 V | VD30V | VD38V | VD31V | VD36V | VD39V | VD32V | VD37V | VD33V | VD34V | VD35V | VD30I | VD38I | VD31I | VD36I | VD39I | VD32I | VD37I | VD33I |

Range Selection

See table below to select I/O ranges when using a current input. It is generally easier to select ranges before installation. See the model/serial number label for module information, options, or if a custom range was specified. The module side label lists common ranges.

For ranges not listed here or for ranges that fall between the listed ranges see api-usa.com/APD6380 and download [apd6380ranges.pdf](#) for the complete range table. It may also be possible to use the next highest setting and trim the output signal with the zero and span potentiometers.

APD 6380 Current Input Range Selection

- Switch A: Set to "I" for current input
- Switch B: Input range
- Switch C: Input range
- Switch D: Output range
- Switch E: Set to "V" for voltage output or "I" for current output

| Output | 0-1 V | 0-2 V | 0-4 V | 1-5 V | 0-5 V | 0-8 V | 2-10 V | 0-10 V | ±5 V | ±10 V | 0-2 mA | 0-4 mA | 0-8 mA | 2-10 mA | 0-10 mA | 0-16 mA | 4-20 mA | 0-20 mA |
|----------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|--------|--------|--------|---------|---------|---------|---------|---------|
| Switches | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE |
| Input | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE | ABCDE |
| 0-4 mA | IA60V | IA68V | IA61V | IA66V | IA69V | IA62V | IA67V | IA63V | IA64V | IA65V | IA60I | IA68I | IA61I | IA66I | IA69I | IA62I | IA67I | IA63I |
| 0-5 mA | IA20V | IA28V | IA21V | IA26V | IA29V | IA22V | IA27V | IA23V | IA24V | IA25V | IA20I | IA28I | IA21I | IA26I | IA29I | IA22I | IA27I | IA23I |
| 0-7.5 mA | I2E0V | I2E8V | I2E1V | I2E6V | I2E9V | I2E2V | I2E7V | I2E3V | I2E4V | I2E5V | I2E0I | I2E8I | I2E1I | I2E6I | I2E9I | I2E2I | I2E7I | I2E3I |
| 0-10 mA | I220V | I228V | I221V | I226V | I229V | I222V | I227V | I223V | I224V | I225V | I220I | I228I | I221I | I226I | I229I | I222I | I227I | I223I |
| 0-12 mA | IA70V | IA78V | IA71V | IA76V | IA79V | IA72V | IA77V | IA73V | IA74V | IA75V | IA70I | IA78I | IA71I | IA76I | IA79I | IA72I | IA77I | IA73I |
| 0-15 mA | IA30V | IA38V | IA31V | IA36V | IA39V | IA32V | IA37V | IA33V | IA34V | IA35V | IA30I | IA38I | IA31I | IA36I | IA39I | IA32I | IA37I | IA33I |
| 0-20 mA | IB20V | IB28V | IB21V | IB26V | IB29V | IB22V | IB27V | IB23V | IB24V | IB25V | IB20I | IB28I | IB21I | IB26I | IB29I | IB22I | IB27I | IB23I |
| 0-25 mA | I820V | I828V | I821V | I826V | I829V | I822V | I827V | I823V | I824V | I825V | I820I | I828I | I821I | I826I | I829I | I822I | I827I | I823I |
| 0-30 mA | I230V | I238V | I231V | I236V | I239V | I232V | I237V | I233V | I234V | I235V | I230I | I238I | I231I | I236I | I239I | I232I | I237I | I233I |
| 0-40 mA | I060V | I068V | I061V | I066V | I069V | I062V | I067V | I063V | I064V | I065V | I060I | I068I | I061I | I066I | I069I | I062I | I067I | I063I |
| 0-50 mA | I020V | I028V | I021V | I026V | I029V | I022V | I027V | I023V | I024V | I025V | I020I | I028I | I021I | I026I | I029I | I022I | I027I | I023I |
| 0-60 mA | IB30V | IB38V | IB31V | IB36V | IB39V | IB32V | IB37V | IB33V | IB34V | IB35V | IB30I | IB38I | IB31I | IB36I | IB39I | IB32I | IB37I | IB33I |
| 0-75 mA | I830V | I838V | I831V | I836V | I839V | I832V | I837V | I833V | I834V | I835V | I830I | I838I | I831I | I836I | I839I | I832I | I837I | I833I |
| 0-80 mA | I960V | I968V | I961V | I966V | I969V | I962V | I967V | I963V | I964V | I965V | I960I | I968I | I961I | I966I | I969I | I962I | I967I | I963I |
| 0-90 mA | I3F0V | I3F8V | I3F1V | I3F6V | I3F9V | I3F2V | I3F7V | I3F3V | I3F4V | I3F5V | I3F0I | I3F8I | I3F1I | I3F6I | I3F9I | I3F2I | I3F7I | I3F3I |
| 0-100 mA | I920V | I928V | I921V | I926V | I929V | I922V | I927V | I923V | I924V | I925V | I920I | I928I | I921I | I926I | I929I | I922I | I927I | I923I |
| 0-117 mA | I080V | I088V | I081V | I086V | I089V | I082V | I087V | I083V | I084V | I085V | I080I | I088I | I081I | I086I | I089I | I082I | I087I | I083I |
| 0-120 mA | I330V | I338V | I331V | I336V | I339V | I332V | I337V | I333V | I334V | I335V | I330I | I338I | I331I | I336I | I339I | I332I | I337I | I333I |
| 0-125 mA | I090V | I098V | I091V | I096V | I099V | I092V | I097V | I093V | I094V | I095V | I090I | I098I | I091I | I096I | I099I | I092I | I097I | I093I |
| 0-150 mA | I030V | I038V | I031V | I036V | I039V | I032V | I037V | I033V | I034V | I035V | I030I | I038I | I031I | I036I | I039I | I032I | I037I | I033I |
| 0-175 mA | I140V | I148V | I141V | I146V | I149V | I142V | I147V | I143V | I144V | I145V | I140I | I148I | I141I | I146I | I149I | I142I | I147I | I143I |
| 0-200 mA | I120V | I128V | I121V | I126V | I129V | I122V | I127V | I123V | I124V | I125V | I120I | I128I | I121I | I126I | I129I | I122I | I127I | I123I |

Electrical Connections

WARNING! All wiring must be performed by a qualified electrician or instrumentation engineer. See diagram for terminal designations and wiring examples. Consult factory for assistance. Avoid shock hazards! Turn signal input, output, and power off before connecting or disconnecting wiring. Polarity must be observed for output wiring connections. If the module does not function, check switch settings and wiring.

| Type of Device for Output | - Terminal | + Terminal |
|--|------------|-------------------------------|
| Measuring/recording device accepts a voltage input. | 3 (-) | 4 (+) switch E set to "V" |
| Measuring/recording device accepts a mA (current) input and the input is unpowered or passive. APD module provides the loop power. | 3 (-) | 4 (+20 V) switch E set to "I" |
| Measuring/recording device accepts a mA (current) input and provides power to the current loop. | 2 (-) | 3 (+) switch E set to "I" |

| Type of Input Device | Terminal | Terminal |
|--|----------|----------|
| Sensor or transmitter with an AC voltage or milliamp output. | 9 | 11 |

APD 6380 Voltage Output

Set switch E to "V" for a voltage output. If your receiving device (such as a PLC or a display) uses a voltage input, use terminals 3 and 4 as shown at right.

APD 6380 Current Output

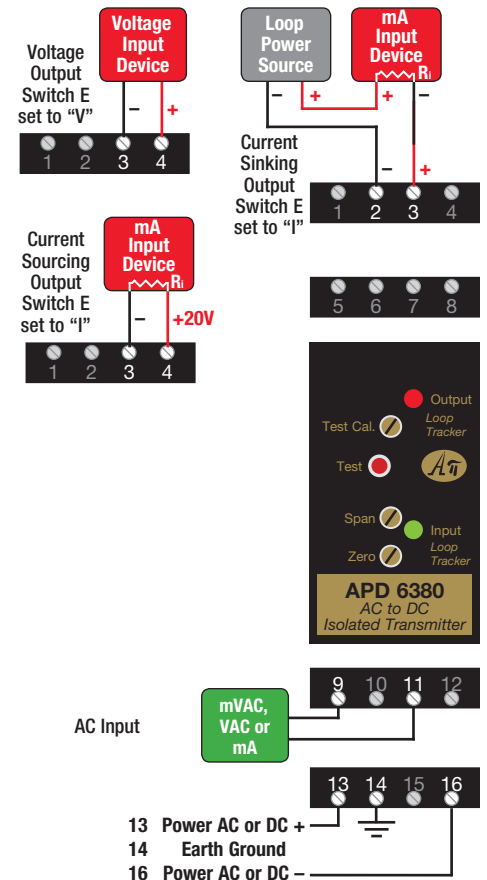
Set switch E to "I" for a current output. Determine if your receiving device (such as a PLC or a display) provides power to the current loop or if the loop must be powered by the APD module. Typical voltage may be 9-24 VDC at your device's input terminals if it provides power to the loop. If your device does not power the current loop, the APD can provide power using terminals 3 and 4 as shown at right. If it provides power to the loop or an external supply provides power to the loop, use terminals 2 and 3 as shown at upper right.

APD 6380 Input

Set switch A to "V" for a voltage input or "I" for a current input. Connect the AC signal input to terminals 9 and 11 as shown at right. Either polarity may be used.

Module Power Terminals

Check white model/serial number label for module operating voltage to make sure it matches available power. When using DC power, either polarity is acceptable, but for consistency with similar API products, positive (+) can be wired to terminal 13 and negative (-) can be wired to terminal 16.

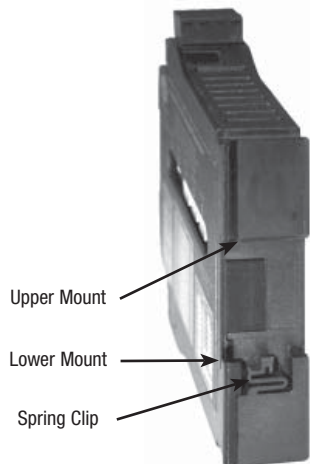


Precautions

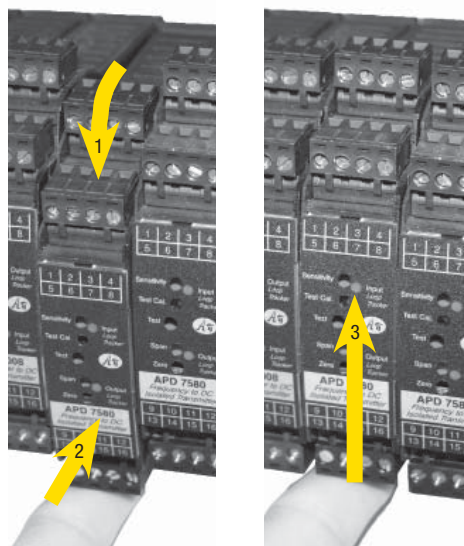
WARNING! Avoid shock hazards! Turn signal input, output, and power off before connecting or disconnecting wiring, or removing or installing module.

Installation Location

The housing clips to a standard 35 mm DIN rail. The housing is IP40 rated and should be mounted inside a panel or enclosure.



Installation

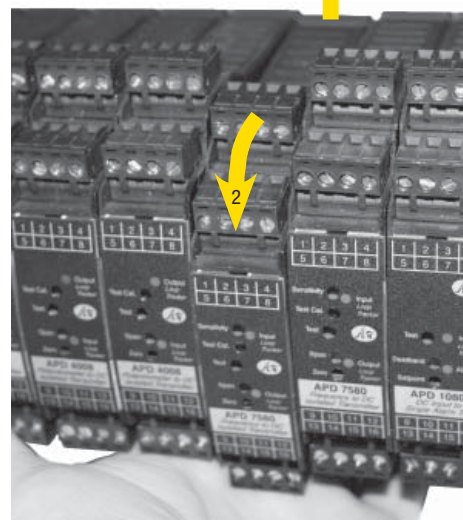


1. Tilt front of module downward and position against DIN rail.
2. Clip Lower Mount to bottom edge of DIN rail.
3. Push front of module upward until Upper Mount snaps into place.

Removal

Avoid shock hazards! Turn signal input, output, and power off before removing module.

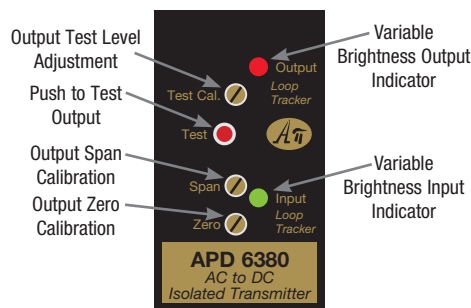
1. Push up on bottom back of module.
2. Tilt front of module downward to release Upper Mount from top edge of DIN rail.
3. The module can now be removed from the DIN rail.



Calibration

Front-mounted Zero and Span potentiometers are used to calibrate the output to compensate for load and lead variations.

1. Apply power to the module and allow a minimum 20 minute warm up time.
2. Using an accurate calibration source, provide an input to the module equal to the minimum input required for the application.
3. Using an accurate measurement device for the output, adjust the Zero potentiometer for the exact minimum output desired. The Zero control should only be adjusted when the input signal is at its minimum. This will produce the corresponding minimum output signal. Example: for 4-20 mA output, the Zero control will provide adjustment for the 4 mA or low end of the signal.
4. Set the input at maximum and adjust the Span pot for the exact maximum output desired. The Span control should only be adjusted when the input signal is at its maximum. This will produce the corresponding maximum output signal. Example: for 4-20 mA output, the Span control will provide adjustment for the 20 mA or high end of the signal.
5. Repeat adjustments for maximum accuracy.



Output Test Function

When the Test button is depressed it will drive the output with a known good signal that can be used as a diagnostic aid during initial start-up or troubleshooting. When released, the output will return to normal.

The Test Cal. potentiometer is factory set to approximately 50% output. It can be adjusted to set the test output from 0 to 100% of the output span. Press and hold the Test button and adjust the Test Cal. potentiometer for the desired output level.

Operation

The APD 6380 accepts an AC voltage or current input and provides an optically isolated DC voltage or current output that is linearly related to the input.

The green LoopTracker® input LED provides a visual indication that a signal is being sensed by the input circuitry of the module. It also indicates the input signal strength by changing in intensity as the process changes from minimum to maximum.

If the LED fails to illuminate, or fails to change in intensity as the process changes, check the module power or signal input wiring. Note that it may be difficult to see the LEDs under bright lighting conditions.

The red LoopTracker output LED provides a visual indication that the output signal is functioning. It becomes brighter as the input and the corresponding output change from minimum to maximum.

For current outputs, the red LED will only light if the output loop current path is complete. For either current or voltage outputs, failure to illuminate or a failure to change in intensity as the process changes may indicate a problem with the module power or signal output wiring.

Service

We service what we sell! Please obtain a Return Materials Authorization number (RMA#) by calling Customer Service at 800-794-5883 or following instructions for service at www.mod-tronic.com/API_products.html. Include the RMA# and the return reason along with the product.

Shipping costs to us must be prepaid by the customer. For your protection, items must be carefully packed to prevent damage in shipment and insured against possible damage or loss. API will not be responsible for

damage resulting from careless or insufficient packing or loss in transit. API will evaluate in-warranty products at no charge. API will evaluate out of warranty products for a nominal charge.

If API determines that the returned product is under warranty, it will repair the product or warrant parts thereof at no charge, or if unrepairable, replace it with the same or functionally equivalent product whenever possible.

Products or parts thereof not covered by warranty will be repaired or replaced at customer expense upon customer authorization.

API will return the warranted product at its expense and non-warranty product at customer expense.

API will use a shipping method (carrier to be at sole discretion of API) equal to or faster than the method used by the customer.

Warranty

Products manufactured or sold by Absolute Process Instruments Inc. (API) are warranted to be free from significant deviations in material and workmanship for the time period from date of purchase according to the product category below. During this time, and within the boundaries set forth in this warranty statement, API will, at its sole discretion, correct the product problem or replace the product.

API signal conditioners, alarms, transmitters:
Lifetime under terms stated herein.

This warranty shall not apply to product problems resulting from improper application, installation, incorrect wiring, operation outside of product specifications, abuse, misuse, unauthorized modification, accidents, power surges, power disruptions, power outages, static electricity, im-

proper voltages or currents, inadequate site maintenance or preparation, acts of God, weather and its effects, lightning, floods, fire, earthquake, war, riots, military action, etc.

API products are not for use for, with, or in any medical devices or applications including, but not limited to, patient care, life support systems or medical research. API assumes no responsibility or liability for any loss or damages resulting from use of a API product in a medical or life support application. API products are not for use for, with, or in any hazardous environments.

This warranty is in lieu of all other warranties, expressed or implied, including but not limited to any implied warranty of merchantability, fitness, or adequacy for any particular purpose or use. API shall not be liable for

any special, incidental, or consequential damages, whether in contract, tort, or otherwise. In no event shall API be liable for direct, indirect, special, incidental or consequential damages (including loss of profits or loss of time) resulting from the performance of an API product. In all cases, API liability will be limited to the original cost of the product in question. API reserves the right to make improvements in design, construction, and appearance of products without notice. API may at its sole discretion discontinue support, warranty, or repair of products which it deems are obsolete or for which repair parts are no longer available.

No employee or agent of API has the authority to modify the terms of this warranty in any manner whatsoever without the express written permission of API.

API maintains a constant effort to upgrade and improve its products. Specifications are subject to change without notice. Consult factory for your specific requirements.