AC to DC Transmitters, Isolated, Field Rangeable — APD 6380

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 mV_{RMS}
May be selectively wired for sinking or sourcing mA output

Output Ripple and Noise
Less than 10 mV_{RMS}

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 V_{RMS} 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

LIFETIME WARRANTY

1 Minute Setup!

Free Factory I/O Setup!

Made in USA



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.

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.

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

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

Switch Settings for Voltage Inputs

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.

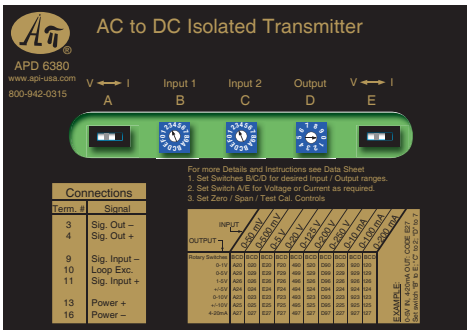
For ranges not listed here or for ranges that fall between the listed ranges see **api-usa.com/APD6380** and download **apd6380ranges.pdf** for the complete range table.

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																		
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	V0E0V	V0E8V	V0E1V	V0E6V	V0E9V	V0E2V	V0E7V	V0E3V	V0E4V	V0E5V	V0E0I	V0E8I	V0E1I	V0E6I	V0E9I	V0E2I	V0E7I	V0E3I
0-400 mV	V060V	V068V	V061V	V066V	V069V	V062V	V067V	V063V	V064V	V065V	V060I	V068I	V061I	V066I	V069I	V062I	V067I	V063I
0-500 mV	V020V	V028V	V021V	V026V	V029V	V022V	V027V	V023V	V024V	V025V	V020I	V028I	V021I	V026I	V029I	V022I	V027I	V023I
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	V0F0V	V0F8V	V0F1V	V0F6V	V0F9V	V0F2V	V0F7V	V0F3V	V0F4V	V0F5V	V0F0I	V0F8I	V0F1I	V0F6I	V0F9I	V0F2I	V0F7I	V0F3I
0-1.5 V	V030V	V038V	V031V	V036V	V039V	V032V	V037V	V033V	V034V	V035V	V030I	V038I	V031I	V036I	V039I	V032I	V037I	V033I
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

Switch Settings for Current Inputs, Wiring

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																		
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	IO60V	IO68V	IO61V	IO66V	IO69V	IO62V	IO67V	IO63V	IO64V	IO65V	IO60I	IO68I	IO61I	IO66I	IO69I	IO62I	IO67I	IO63I
0-50 mA	IO20V	IO28V	IO21V	IO26V	IO29V	IO22V	IO27V	IO23V	IO24V	IO25V	IO20I	IO28I	IO21I	IO26I	IO29I	IO22I	IO27I	IO23I
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	IOB0V	IOB8V	IOB1V	IOB6V	IOB9V	IOB2V	IOB7V	IOB3V	IOB4V	IOB5V	IOB0I	IOB8I	IOB1I	IOB6I	IOB9I	IOB2I	IOB7I	IOB3I
0-120 mA	I330V	I338V	I331V	I336V	I339V	I332V	I337V	I333V	I334V	I335V	I330I	I338I	I331I	I336I	I339I	I332I	I337I	I333I
0-125 mA	IO90V	IO98V	IO91V	IO96V	IO99V	IO92V	IO97V	IO93V	IO94V	IO95V	IO90I	IO98I	IO91I	IO96I	IO99I	IO92I	IO97I	IO93I
0-150 mA	IO30V	IO38V	IO31V	IO36V	IO39V	IO32V	IO37V	IO33V	IO34V	IO35V	IO30I	IO38I	IO31I	IO36I	IO39I	IO32I	IO37I	IO33I
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

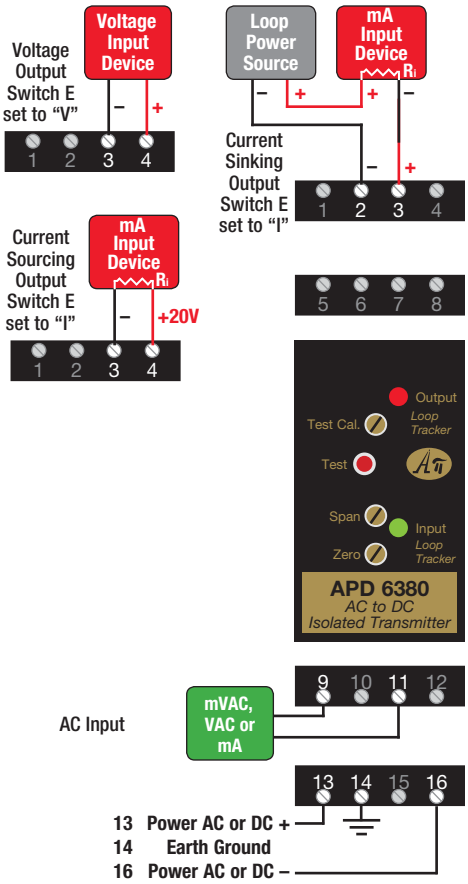
Set switch A to "V" for a voltage input or "I" for a current input.

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.



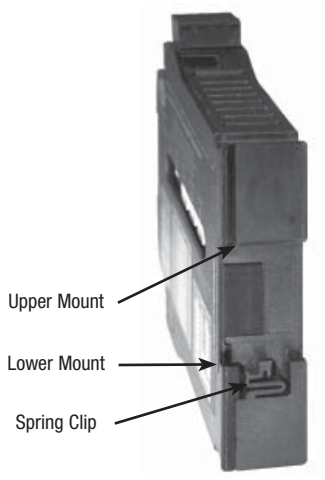
Installation/Removal, Calibration, Output Test, Operation

Precautions

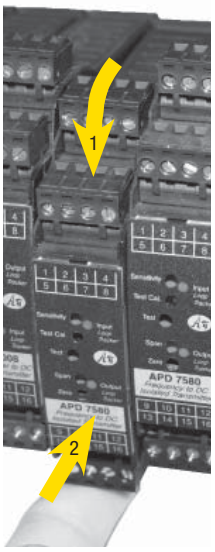
WARNING! Avoid shock hazards! Turn signal input, output, and power off before connecting or disconnecting wiring, or removing or installing module.

Installation Location

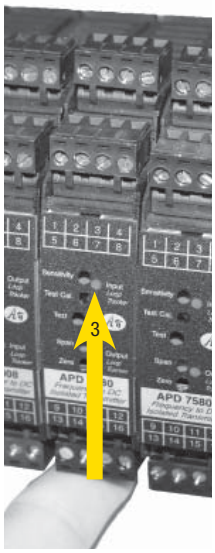
The housing clips to a standard 35 mm DIN rail. The housing is IP40 rated and should be mounted inside a panel or enclosure.



Installation



1. Tilt front of module downward and position against DIN rail.
2. Clip Lower Mount to bottom edge of DIN rail.

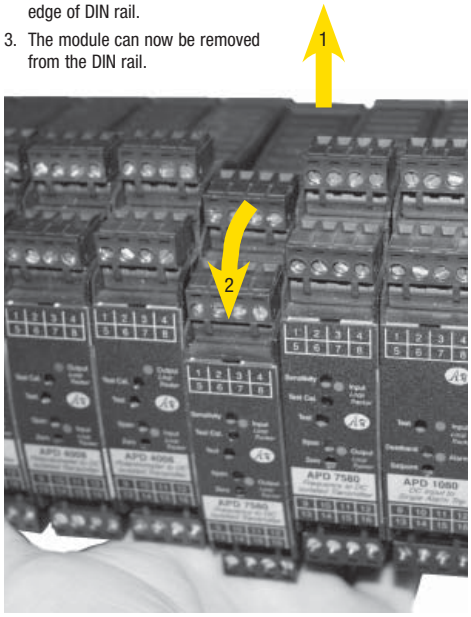


3. Push front of module upward until Upper Mount snaps into place.

Removal

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

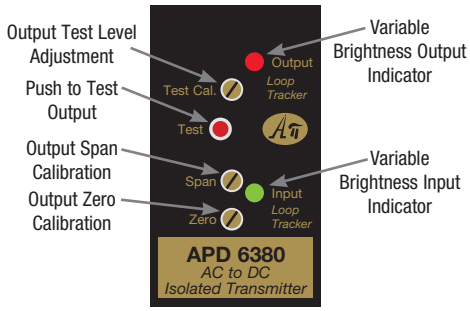
1. Push up on bottom back of module.
2. Tilt front of module downward to release Upper Mount from top edge of DIN rail.
3. The module can now be removed from the DIN rail.



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 warranted 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 warrantied 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, improper 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.