

exise

Product Bulletin

20ISOHAA
20ISOMAA
20ISOSAA

General Purpose High Voltage Isolator

20ISO Series

Description

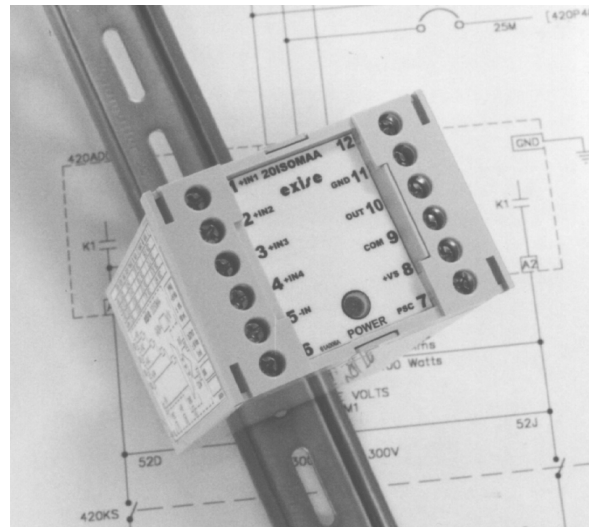
The General Purpose High Voltage Isolator is designed for use in harsh industrial environments where a reliable and stable feedback signal is required for instrumentation and regulation purposes. The 20ISO series of isolators is rated at 1000V to ground on the input terminals and can measure signals up to 1000V. The output is bipolar and rated at 0-10V. The 20ISO series is a 3 port isolator so that the input, output, and power supply may be at different ground potentials. It is ideally suited to applications where eliminating ground current loops on long runs is required.

Applications

- ◇ Voltage & Current feedback for DC drive systems.
- ◇ Voltage & Current isolation for PLC inputs.
- ◇ Isolation for reference signals to drives and PLC's.
- ◇ Isolate chart recorder inputs.

Features

- ◇ Standard 35 mm DIN rail mount.
- ◇ Only 3 different catalog numbers cover all input voltages from low millivolts to 1000VDC.
- ◇ One catalog number, 20ISOHAA, covers all typical drive voltage feedback ranges.
- ◇ One catalog number, 20ISOSAA, covers all typical drive current feedback ranges when monitoring a millivolt shunt.
- ◇ No internal resistors to change to switch to a different gain band.
- ◇ Zero adjustment is independent of the gain adjustment.



Selecting the Catalog Number

To select the correct isolator catalog number, start by determining the required gain. The gain is calculated simply by dividing the required output voltage by the required input voltage:

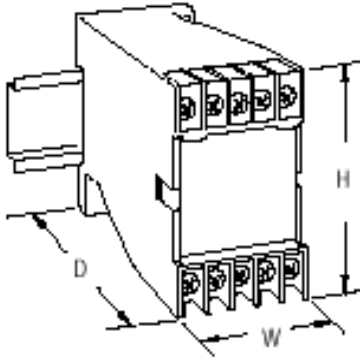
$$\text{GAIN} = \text{Output Voltage} / \text{Input Voltage}$$

Hint: When monitoring varying wave forms, for example, the voltage feedback on an SCR drive, keep in mind that the peak voltage is considerably higher than the RMS voltage. An output voltage scaling should be chosen such that the peak output does not exceed 10V.

Once the gain is known, pick the gain band from the following chart. Pick a gain band whose midrange gain falls the closest to your required gain. Select the isolator catalog number associated with the gain band you have selected.

Exise 20ISO_AA General Purpose High Voltage Isolator Gain Ranges							
Catalog Number and Gain Band	Midrange Gain	Minimum Gain	Maximum Gain	Input Impedance	Nominal Output	Maximum Vin at Minimum Gain	Maximum Vin at Maximum Gain
20ISOHAA-1	0.024	0.010	0.039	1,608,000	10.0	1031	258
-2	0.032	0.013	0.052	1,206,000	10.0	773	193
-3	0.049	0.019	0.078	804,000	10.0	515	129
-4	0.097	0.039	0.155	402,000	10.0	258	64.4
20ISOMAA-1	0.090	0.036	0.14	434,100	10.0	278	69.6
-2	0.29	0.12	0.47	133,100	10.0	85.3	21.3
-3	0.92	0.37	1.5	42,200	10.0	27.1	6.76
-4	3.22	1.29	5.2	12,100	10.0	7.76	1.94
20ISOSAA-1	2.40	0.96	3.8	16,236	10.0	10.41	2.60
-2	9.43	3.77	15.1	4,136	10.0	2.65	0.663
-3	34.6	13.9	55	1,126	10.0	0.722	0.180
-4	130	52	207	301	10.0	0.193	0.048

Outline Dimensions



H = 2.9" (73mm)
W = 2.2" (55mm)
D = 4.5" (114mm)

Specifications

- ◇ Operating Power: +15VDC @ 100mA
- ◇ Operating Conditions: 0-60C, 5-95% RH, non-condensing

- ◇ Output Voltage: +/-10VDC
- ◇ Output Current Limit: 5mA, short circuit protected
- ◇ Frequency Response: 1.5kHz minimum
- ◇ Installation: DIN rail mount only.
- ◇ Housing Material: Polycarbonate and ABS
- ◇ Maximum Wire Size: 12 AWG

Ordering Information

After selecting the correct isolator catalog number by following the above procedure, order the quantity required of each catalog number. Please specify the gain required of each unit. If you prefer, Exise will select the correct catalog number and gain band for your application. Specify the input voltage, output voltage, and type of wave form. For current feedback applications, specify the shunt rating (Amps/Millivolt), the motor nameplate ratings, generator nameplate ratings, and desired volts feedback for amperes on the motor.

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