



Surge arresters



General

MJK Surge Arresters are used in applications where excessive voltages caused by lightning or other transient voltage can be expected. MJK Surge Arresters are constructed with dual protection to cover both intermediate and primary protection. Since the electric power from lightning is

tremendous, it is impossible to obtain 100 % protection, but MJK Surge Arresters will give effective protection in case of a lightning strike close to the installation or surges from lightning strikes in other parts of the installation by conducting the surge voltages to ground.

Features

- Protects measuring devices from damage by conducting large power surges and short transients effectively to ground.
- Units for protecting of 2-wire / 4 - 20 mA, 3-wire / 4 - 20 mA and telephone lines is available.

- Surge and transient protection in accordance with Class B (intermediate protection) and Class C (primary protection).



Application

- Protection of telephone lines in regions with lightning.
- Protection of 4 - 20 mA transmitters installed at high / distant locations.

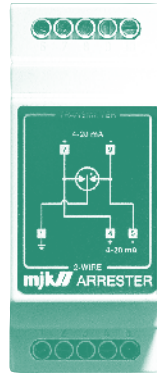
- Protection of 3-wire ultrasonic level meters installed at high locations in regions where lightning often occurs.
- DIN-rail mounting (Panel) or on site mounting (Field).

Function

MJK Surge Arresters are designed with gas arresters, varistors and transil diodes. The units are available in a number of variants for use in instrumentation applications and on SCADA systems.

The components in the surge arresters will not be damaged when activated, so there will no need for replacement after a lightning strike.

Surge arrester for 2-wire connection

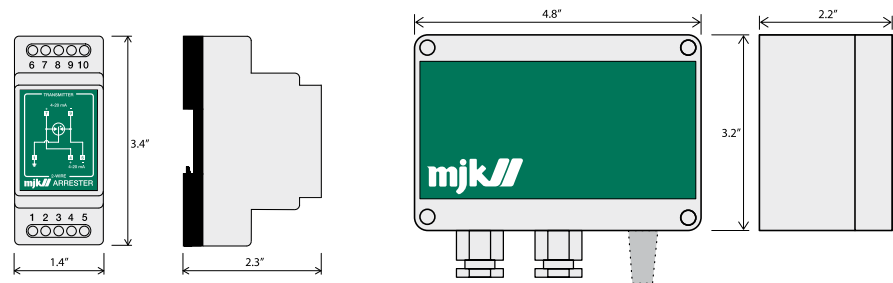


Used for surge protection of measuring signals from 2-wire 4-20mA transmitters. Especially in sewage plants where many transmitters are placed around the plant, protection of the 4-20mA loop wires is an efficient way to protect the individual transmitters and to prevent damage to other equipment such as PLC's, signal converters and other measuring and control equipment. Available for DIN rail mounting (Panel) or on site mounting (Field)

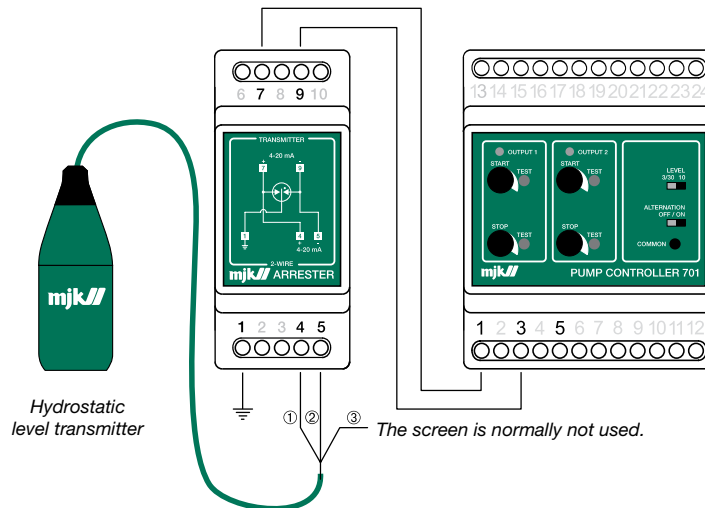
Specifications

Input:	Panel	4 - 20 mA	Field
Output:		4 - 20 mA	
Recommended ground wire gauge:		min. A.W.G. 11	
Max. forward voltage / forward resistance:		30 V DC / < 50 Ω	
Max. discharge current:		20 kA	
Temperature:		- 5 ... + 140 °F	
Enclosure:	NEMA 1		NEMA 4X
Mounting:	DIN rail		Wall or bracket

Dimensions



Connection

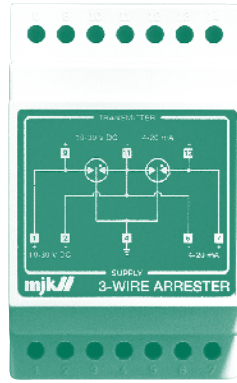


A MJK Pump Controller 701 is surge protected on the signal input with a MJK 2-wire surge protector.

Order number

200180	2-wire surge arrester (Panel)
200181	2-wire surge arrester (Field)

Surge arrester for 3-wire connection

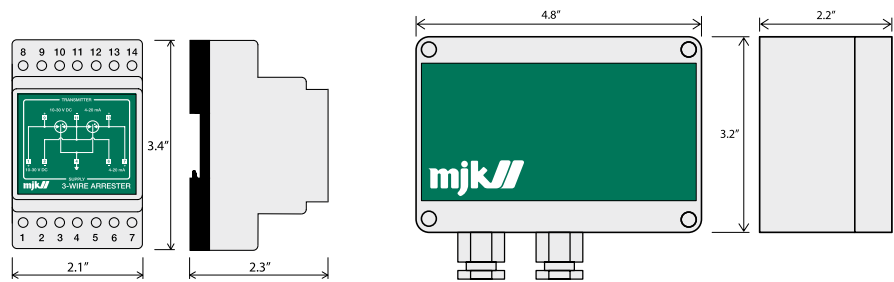


Used for surge protection of signals received from 3-wire transmitters mounted in a plant subject. Especially in sewage plants, where many transmitters are placed around the plant, protection on the 4-20mA wires is an efficient way to protect the individual transmitters and to prevent damage to other equipment such as PLC's, signal converters and frequency converters.
Available for DIN rail mounting (Panel) or on site mounting (Field)

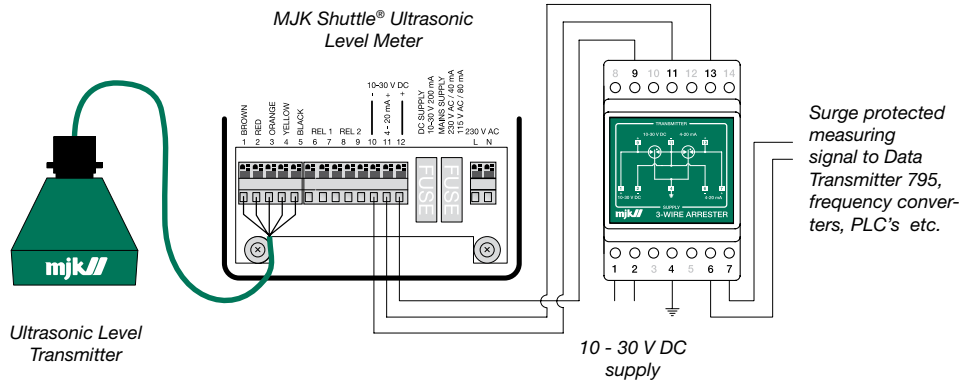
Specifications

	Panel	Field
Input:	4 - 20 mA	
Output:	4 - 20 mA	
Recommended ground wire gauge:	min. A.W.G. 11	
Max. forward voltage / forward resistance:	30 V DC / <math>< 2 \times 50 \Omega</math>	
Max. discharge current:	20 kA	
Temperature:	-- 5 ... + 140 °F	
Enclosure:	NEMA 1	NEMA 4X
Mounting:	DIN rail	Wall or bracket

Dimensions



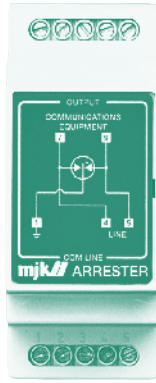
Connection



Order number

200182	3-wire surge arrester (Panel)
200183	3-wire surge arrester (Field)

Surge arrester for communications line

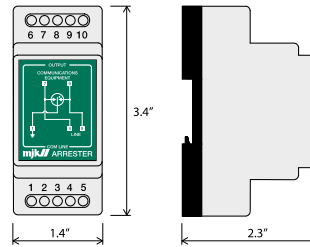


Used for surge protection of communications lines such as telephone lines, RS-485 twisted pair cables between pumping stations and serial communication links between instruments, PLC's etc. Surge protection is efficient for protection of remote installations or connections to the telephone network and user owned cables between pumping stations and water wells on at the plant. The surge protector prevents damages on other equipment on the plant.

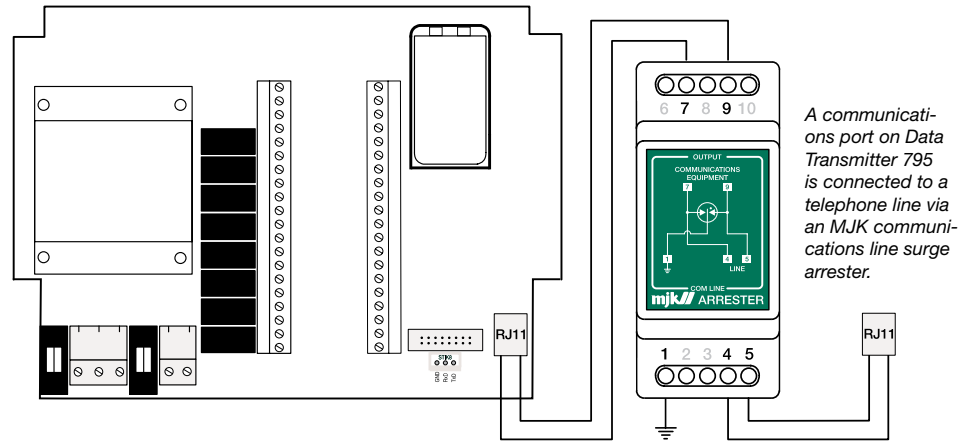
Specifications

Input:	From modem or serial port
Output:	From communications line
Recommended ground wire gauge:	min. A.W.G. 11
Max. forward voltage / forward resistance:	170 V for 200186 and 200187, 13 V for 200184 / < 50 Ω
Max. discharge current:	20 kA
Temperature:	- 5 ... + 140 °F
Enclosure:	IP 22
Mounting:	DIN rail

Dimensions



Connection



Order number

200184	Surge arrester for RS 485 lines (Panel)
200186	Surge arrester for telephone lines, with terminals (Panel)
200187	Surge arrester for telephone lines, with RJ45 plug and connecting cable (Panel)

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