

## Over current protection (C00.28=6910)

### The significance of over current protection:

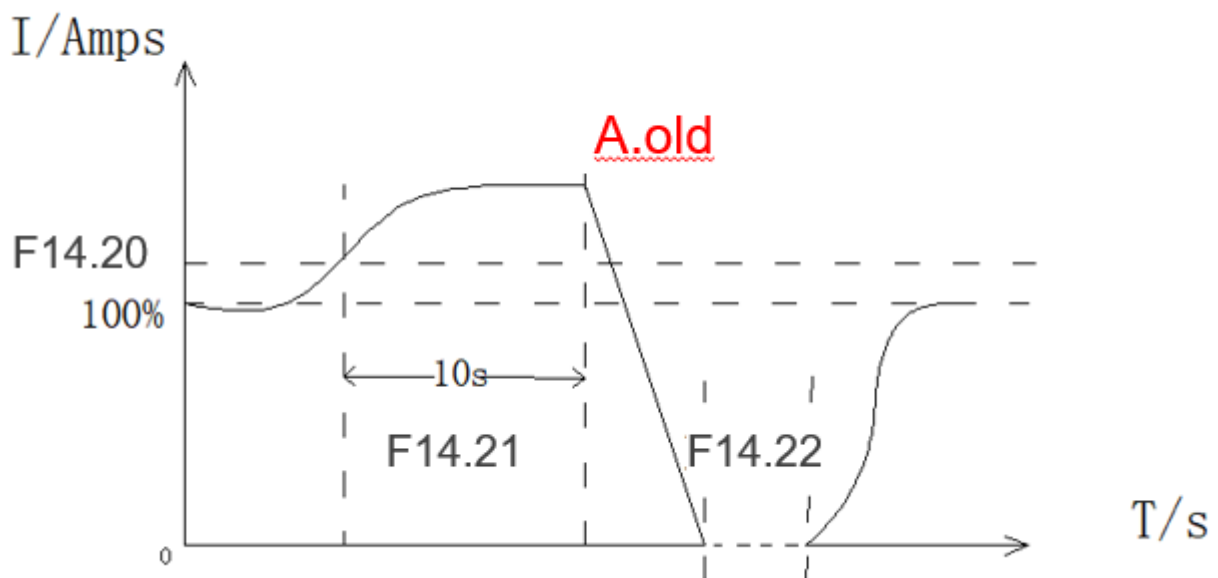
When the inverter power is 1~2 level larger than the pump rated power, for example a 30kw inverter drive a 15kw pump. The inverter overcurrent threshold value is larger than the pump rated current. When the pump is blocked or encounter other failures, pump are easily damaged without any protection. Therefore, overcurrent protection is required to prevent damage to the motor.

(当变频器的功率比泵的额定功率大 1~2 级时，例如 30kw 的变频器驱动 15kw 的泵，变频器的过流阈值就会大于泵的额定电流。当泵被堵塞或遇到其他故障时，如果没有任何保护，泵很容易被损坏。因此，需要过流保护来防止电机的损坏。)

### Principle of detection:

The overcurrent protection reports a fault generally due to abnormal motor operation or blocking, resulting in an increased current value. The high rated current value of the selected inverter may result in an overcurrent fault not being reported, so that when the current value is higher than the set value for a period of time it will report A.Old

(过流保护报故障一般是由于电机运行异常或者是堵转，导致电流值升高。而选择的变频器的额定电流值又很高，可能导致不会报过流故障，因此当电流值高于设定值一段时间后就会报 A.Old)



### Related parameter settings:

Function code number	Function code name	Set value range and definition	Factory setting	Instruction	Address
F14.20	Overcurrent protection detection current	0.0 - 999.9A	0.0A	A.Old is displayed on alarm	0xE14
F14.21	Overcurrent	0.0sec~	10.0sec	Overcurrent protection is switched off when	0xE15

	protection detection time	3000.0sec		F14.20 is set to 0	
F14.22	Automatic recovery time for overcurrent protection	0.0sec~3000.0sec	10.0sec		0xE16

### Over current protection function logic:

1.1、When the frequency converter is in operation and the output current is greater than the F14.20 overcurrent protection detection point, an A.Old warning is reported after the F14.21 overcurrent detection protection time.

1.2. After the warning is reported, the frequency converter is decelerated or stopped freely according to the setting in F14.53 Decimal.

1.3、Timing starts after the warning is reported and the frequency converter starts running from the current frequency after the F14.22 overcurrent protection recovery delay.

1.4、If the F14.20 overcurrent protection detection point is set to 0, the overcurrent protection is switched off.

1.5、Overcurrent protection can still be triggered in the deceleration and stop state. After triggering the protection, the stop will be carried out according to the setting of F14.53 decimal, and the operation will not be resumed again after the stop.

1.6. If the output decreases below the protection point during the overcurrent protection detection time, it will not enter the overcurrent protection again, each detection time is independent of each other and will not be accumulated.

(1. 1、当变频器处于运行状态中，且输出电流大于 F14. 20 过流保护检测点后，经过 F14. 21 过流检出保护时间后报 A.Old 告警。

1. 2、报警后，变频器按照 F14. 53 十位的设定进行减速或自由停机。

1. 3、从报警后开始计时，经过 F14. 22 过流保护恢复延时后，变频器从当前频率开始运行。

1. 4、若 F14. 20 过流保护检测点设为 0，则关闭过流保护。

1. 5、减速停机状态下依然能触发过流保护，触发保护后将按照 F14. 53 十位的设定进行停机，停机后不会再次恢复运行。

1. 6、若在过流保护检出时间内，输出减小至保护点以下后，不会再进入过流保护，每次的检测时间彼此独立，不进行累计。)