

# (19) United States

# (12) Patent Application Publication (10) Pub. No.: US 2022/0354010 A1 Smith, III et al.

#### Nov. 3, 2022 (43) **Pub. Date:**

## (54) MAGNETIC OPERATOR INTERFACE ASSEMBLY

(71) Applicant: New Frontier Technologies LLC, Overland Park, KS (US)

(72) Inventors: Paschal Early Smith, III, Raymore,

MO (US); Chinh Huu Bui, Kansas City, MO (US); Randall Kevin Sambursky, Kearney, MO (US); Donald Craig Walker, Kansas City, MO (US); David W Baarman,

Fennville, MI (US)

(21) Appl. No.: 17/497,063

(22) Filed: Oct. 8, 2021

## Related U.S. Application Data

(63) Continuation of application No. 17/306,381, filed on May 3, 2021, now Pat. No. 11,172,585.

### **Publication Classification**

(51) Int. Cl. H05K 5/03 (2006.01)H01F 7/02 (2006.01)

U.S. Cl. CPC ...... H05K 5/03 (2013.01); H01F 7/0242 (2013.01)

#### (57)**ABSTRACT**

A system for connecting and monitoring a magnetic operator interface assembly. The assembly can provide protection of an operator interface by limiting glare, UV damage, and exposure to rain. It can also protect the operator interface from high pressure cleaning equipment. The assembly is removably magnetically mountable to a sealed enclosure without breaching the enclosure's seal. The magnetic operator interface assembly can withstand operational forces, staying at a magnetically fixed position and without becoming accidentally detached. It is also easy to intentionally install and remove. The system may include sensors that can inform a local or remote dashboard about the status of the magnetic operator interface assembly, such as whether it is installed and whether the cover is open or closed. The system may also include a locking system to prevent tampering and limit access to the operator interface.

