

## 7. Diagnostics

### 7.1 Error Messages

#### 7.1.1 Fatal Error Codes

The following errors are classified as fatal and require that the system be repowered to be cleared:

Displayed Error Msg.	Fault	Action
Err 11	Excess pules detected on either pulser channel.	Pulse channel detector may have failed.
Err 12	Excess pulser reverse rotation.	Non-return valve may be faulty.
Err 16	Pulser disconnected.	Check pulser connections.
Err 17	Illegal pulser state or state transition.	Check pulser. Channel may have failed or excess rotation speed may have occurred.
Err 34	Processor Silicon Serial Number device not detected.	SSN IC is damaged or missing. Processor may require replacement.
Err 35	EEPROM data error.	Re-enter configuration data. If error reoccurs replace Processor board.
Err 36	EEPROM totals data error.	Re-power system. If error reoccurs replace Processor board.
Err 38	Flash memory error.	Replace Processor board.
Err 39	EEPROM failure.	EEPROM not responding. Replace processor board.
Err 80	PSU Expansion Card offline.	Check connections to PSU Expansion card.
Err 84	Temperature Probe Interface Card offline.	Check TBus power. Check connections to Temperature IFC.
Err 88	Data message response from Display board not detected.	Check TBus power. Check connections to Display board.
Err 89	Display board not detecting data message from processor.	Check TBus power. Check connections to Display board.

### 7.1.2 Non-Fatal Error Codes

The following errors are classified as non-fatal and either clear after a short timeout or do not prevent another delivery from starting:

Displayed Error Msg.	Fault	Action
AGain	ID was not correctly read.	Present ID again. If error keeps reoccurring then check the connections to the Reader and replace Reader if necessary.
---x---	ID rejected.	The x in the error message is a code indicating the reason the ID was rejected. Possible reasons are: 1. expired ID 2. invalid ID 3. wrong ISO and/or Access No 4. Pre-allocated dollar limit reached. 5. Limit reached 6. ID already in use 7. Expired timer 8. Invalid function code 9. System error
Err 19	The air detect switch has closed during delivery*.	Check for possible sources of air introduction in pumping components.
dEn	LPG density is out of range	If there is a real-time density probe attached, check for faults or check LPG. If using static density parameter, check the value it is set to.
tEP	LPG temperature is out of range	If there is a real-time temp probe attached, check for faults or check LPG. If using a static temp parameter, check the value it is set to.

\*Note: The air detection switch is a normally-open pressure activated switch, which closes when the pressure of the air venting from the pumping unit exceeds a preset level. If this switch is detected closed during a delivery then the delivery is stopped. The switch is only monitored once the delivered amount exceeds one litre.

### 7.1.3 Passive State Indicators

- A colon ':' character replacing the decimal point in the litres display indicates that the system has been power cycled. It disappears once the first delivery starts or once an ID is presented.