



TDR-FSB-F-3D-N/O6-110A

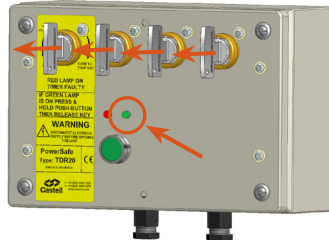
The TDR time delay remote unit is a heavy duty trapped key interlock switch controlled by a fail-safe timer and solenoid. The unit is designed to control access to hazardous machines with run down times and can be used in high risk applications. The unit incorporates a dual channel fail-safe timer, heavy duty continuously rated solenoid, solenoid position monitoring, 20A electrical switch, front panel lamp indication of solenoid position and timer failure with up to four lock centers for multiple access applications.

Operation

The Castell TDR time delay remote unit with electrical isolation is typically used for machine isolation in applications in order to protect the hazardous area from access while power is on.

TDR electronic time delay remote unit with electrical isolation

- ① All keys are trapped.
No signal to the TDR unit.
- ② Continuous voltage signal initiates timer. After time delay, release the keys by pushing the green button.
- ③ All keys are free.



1. The keys are trapped in the TDR. Switch contacts arrangement: 3 normally open and 3 normally closed.
2. When the machine stop sequence is initiated, a signal from the machine control circuits starts the timer in the TDR unit. Once completed, the timer energizes the solenoid illuminating the green LED. By pushing the green button the keys can be released. These keys are taken by the personnell to the machine area.
3. The machine cannot be restarted until all keys are replaced and trapped in the TDR time delay remote unit.

The TDR is available with different solenoid voltages as AC or DC: 24, 110 or 240 V (see order information on page 7 for more details).

The TDR comes with 6 contacts as standard with contacts arrangements as 3NO/3NC, but auxiliary set of contacts are available on request.

Usage

The TDR time delay remote unit with electrical isolation is designed to be part of a safety system and is used to switch off the power. The TDR waits for a signal from the machine which starts the time delay countdown, before releasing a key, which is then used to gain access to a hazardous area via an access interlock such as the AI, AIE or Salus.



The TDR time delay remote unit with electrical isolation is not designed for security purposes.

No hazardous substances were used in the manufacture of this product. The product can be disposed of in standard waste.

Installation

The TDR time delay remote unit with electrical isolation should be mounted to a surface using suitable fasteners (please refer to drawing on page 4-5 for more details). The lock face should be sealed to the panel for ingress protection.

Cables should be connected to the switch in accordance with the applicable wiring diagrams. Ensure that the unit is bonded for earth continuity (please refer to drawing on page 6 for more details).



IMPORTANT:

The interlock should be mounted using anti-tamper fasteners to prevent unauthorised removal.



The TDR range of electronic timer with electrical isolations must be installed by a competent and qualified person who has read and understood these instructions. Please retain this document in your technical file.

Maintenance

Periodic visual checks should be carried out by the site manager / safety officer.
Do not lubricate lock barrel with oil or grease, use CK Dry Powder Graphite if necessary.



In case of defects being detected please contact your nearest Castell Support Department for further actions.
Please see Contact section for contact details.

Technical Data

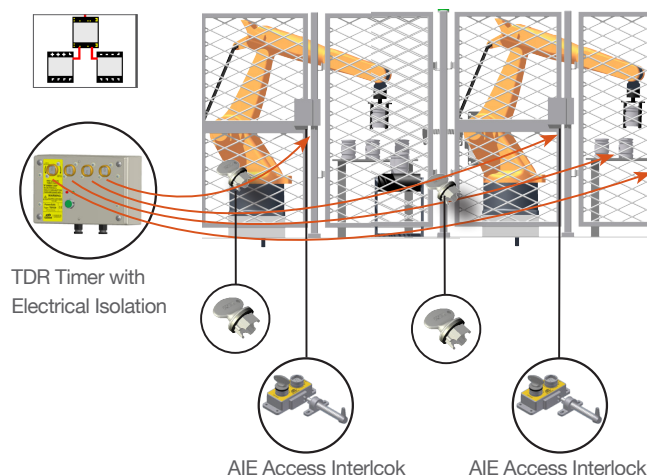
Temperature	Minimum: -5°C [23°F]
	Maximum: 55°C [131°F]
Type of mounting	Surface mount using suitable fasteners (please refer to drawing on page 4-5 for more details)
Weight	5 kg
Material	Brass or Stainless steel lock portions, powder coated mild steel enclosure
Cable Size	M20 Gland x 2
Voltage	24 VAC/VDC and 110 VAC, 240 VAC
Max Motor Voltage	600V
Max Power Consumption	20VA / 18W

Application

The TDR is designed to operate as part of an integrated safety system, controlling access to hazardous areas to motor driven, high risk applications where a certain time rundown is required before access is granted.

While machine is running, the keys are trapped in the TDR interlock, preventing access to the machine area. To gain access to the area, the electrical supply must be switched off via the machine control panel. When the machine stop sequence is initiated, a signal from the machine control circuits starts the internal timer. After a pre-set time (which must exceed the machine run down time), the timer energizes the solenoid illuminating the green LED. By pushing the green button the keys can be released. These keys are taken by the personnell to the AIE access interlocks on the doors.

The machine cannot be restarted until all doors are locked closed and all keys returned to the TDR electronic timer.



EC-Declaration

We, the manufacturers, declare that the components, detailed herein and placed on the market, comply with all the essential health and safety requirements applying to them.

Empowered signatory:

Dr T.C. Whelan
Managing Director

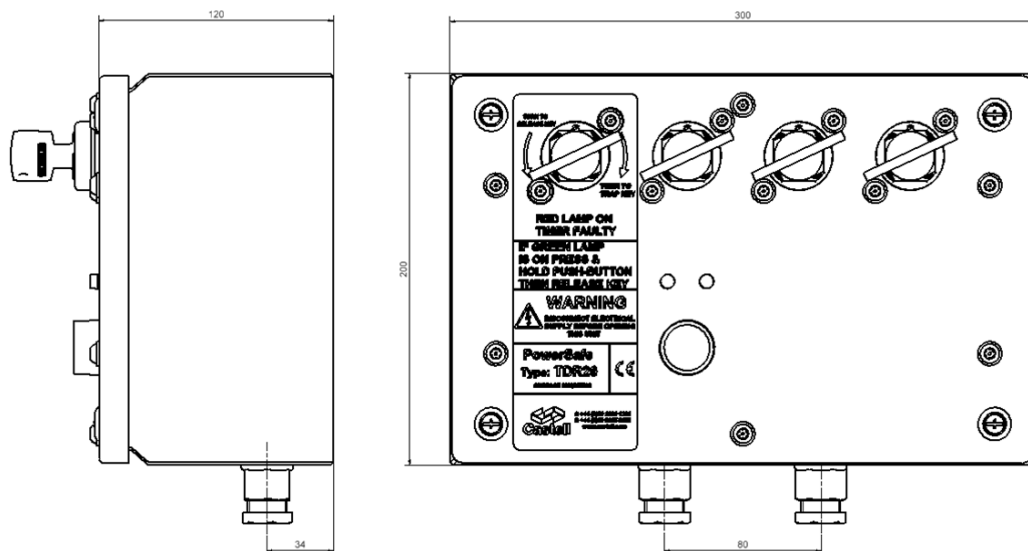


Drawing

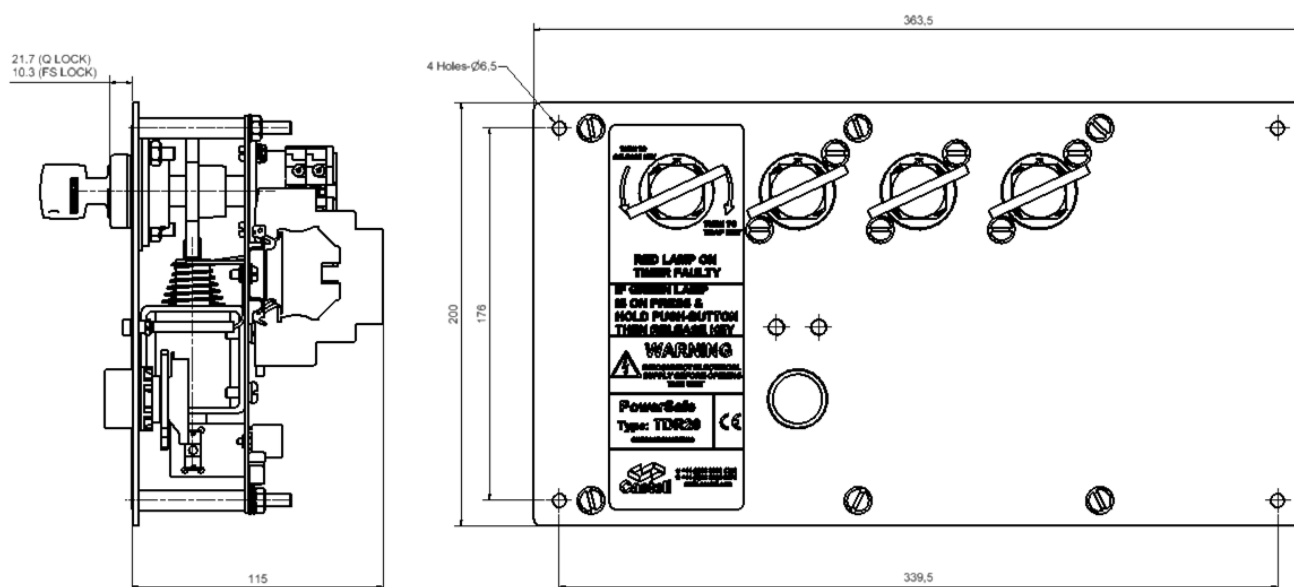
Dimensions:
in mm

Note: For safe mounting, use security screws

TDR, surface mount/enclosure version (FOB = front on board)



TDR, panel mount (BOB = back on board)

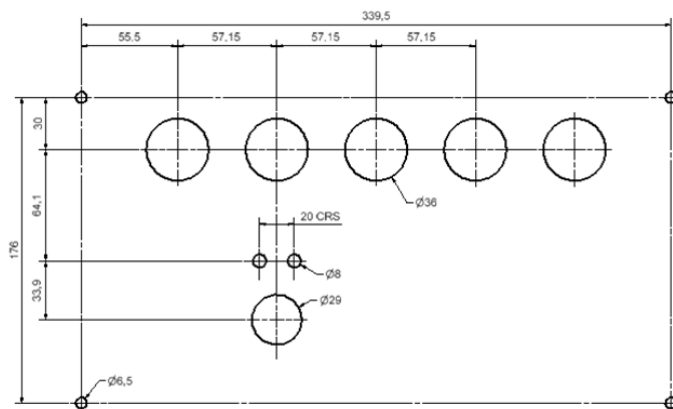
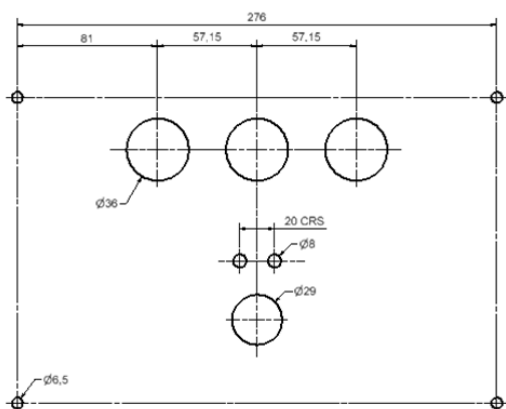
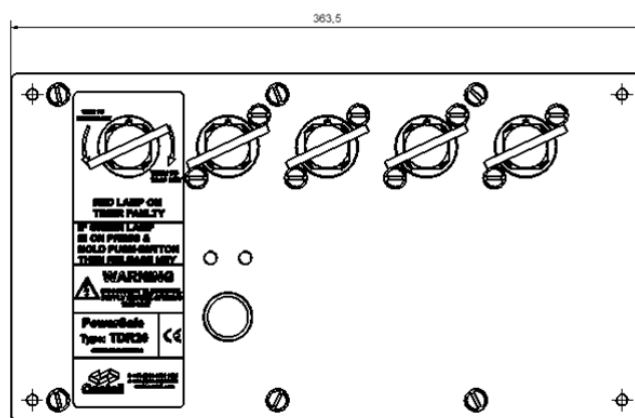
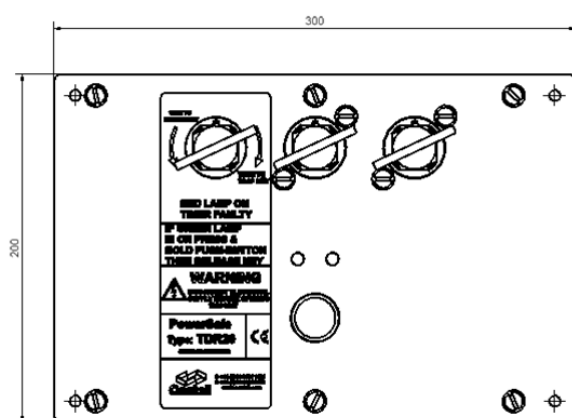


Drawing

Dimensions:
in mm

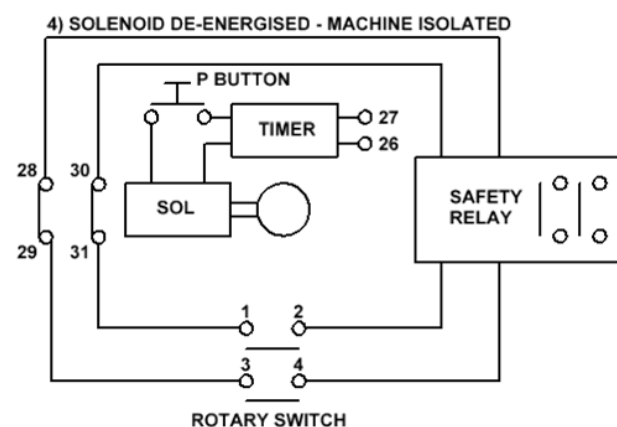
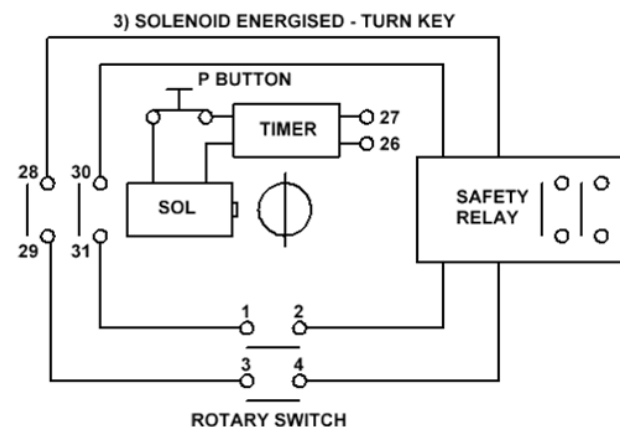
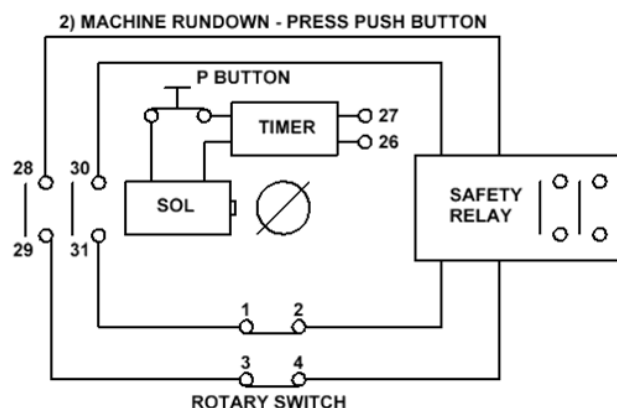
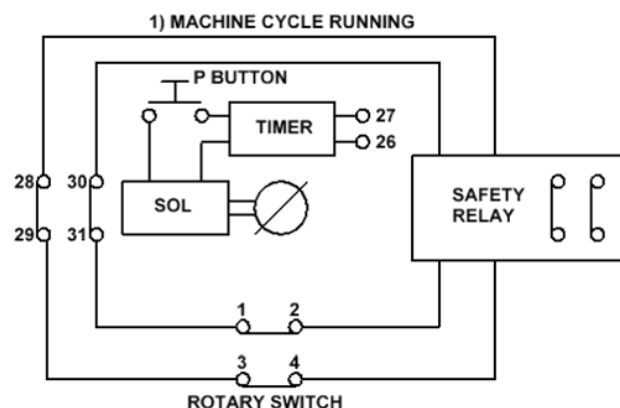
Note: For safe mounting, use security screws

TDR, surface mount/enclosure version (FOB = front on board)



Wiring Diagram

TDR



Order Information

	Product Type	1	2	3	4	5	6	7	8
Part Number	TDR								
Example	TDR	FS	B	F	3	D	N/O6	110	A

9 A1 **Isolation Key Symbol**
(exchange key condition)
OR
 Primary Key Symbol
(double key condition)

10 B1 **Personnel Key Symbol**
(exchange key condition)
OR
 Secondary Key Symbol
(double key condition)

1	Lock portion type	FS ⁽¹⁾ / Q ⁽¹⁾
2	Material	B = Brass / S = Stainless steel
3	Mounting	F = Front of board mount, with enclosure (standard)
4	Secondary (additional) lock portion(s)	1 = 1 secondary lock portion available as standard version
5	Key condition	D = Double key version / S = secondary keys as for exchange key version
6	Contacts arrangement in normal position (standard)	N/O6 = 6 contacts, 3NO/3NC arrangement (standard)
7	Control voltage	110 / 24 / 240 (standard)
8	Current	VAC / VDC
9	Lock portion symbol: Isolation key (for exchange key condition) or Primary key (for double key condition)	FS ⁽¹⁾ up to 3 characters / Q ⁽¹⁾ up to 6 characters
10	Lock portion symbol: Personnel key(s) (for exchange key condition) or Secondary key(s) (for double key condition)	FS ⁽¹⁾ up to 3 characters / Q ⁽¹⁾ up to 6 characters

(1) **FS - Lock type** Up to 3 characters **Q - Lock type** Up to 6 characters

