



HEAVY DUTY PRODUCTS FOR THE  
**METALS INDUSTRY**

 **TR ELECTRONIC**  
... *Passionate* about Sensors.

# HEAVY DUTY PRODUCTS

for the **METALS INDUSTRY**

TR Electronic has been serving the metals industry for decades, with products that can withstand harsh environments yet provide precise measurement and positioning. We understand that IP ratings don't account for things like hot/cold cycles and low surface tension rolling fluids, so we have designed our own tests to simulate these environments. We have also designed systems to account for shock, vibration, and extended temperatures. Contact us for all your harsh environment sensing applications needs.

## HEAVY DUTY HOUSING



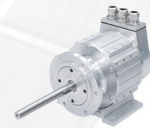
**84 SERIES** ROTARY ENCODER

- ❑ Acidic environments
- ❑ Sealing against hot/cold cycles and creep
- ❑ IP68 protection
- ❑ Flange mount like a normal encoder



**115 SERIES** ROTARY ENCODER

- ❑ Extremely heavy duty housings
- ❑ Heating and cooling options
- ❑ High shaft loadings
- ❑ Foot mounted
- ❑ Rugged construction



**115 SERIES** LINEAR ENCODER

- ❑ Extremely heavy duty housings
- ❑ Heating and cooling options
- ❑ Foot mounted
- ❑ Rugged construction



**DAG** ROTARY HOUSING

- ❑ Foot mounting
- ❑ Large bearing module
- ❑ Standard encoder inside almost any interface is possible



**HD01** ROTARY HOUSING

- ❑ Drop in replacement for resolver upgrades
- ❑ Designed for use with the 58 series encoders
- ❑ Heavy duty steel construction
- ❑ Powder coated for corrosion resistance



**TR3** LINEAR HOUSING

- ❑ High impact protection
- ❑ VITON seals

## SEAL PACK OPTION

- ❑ Hermetically sealed against suction of water, mist and vapor with changing temperatures (tests according to IEC68 T2-30)
- ❑ Oil proof against oils that are capable of creep
- ❑ LA46 with VITON seal to protect against rolling fluids and creep

## LASER DISTANCE

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When it comes to long range non-contact distance measurement, TR Electronic has a broad range of laser solutions even for dirty environments or extreme temperatures. Don't assume lasers won't work for your application, give us a call and let us help you determine if we have a solution.



### LE200 LASER DISTANCE MEASUREMENT

- Industry leading phase shift technology
- Highly accurate and extremely fast
- Works better than competition in dust, steam and fog
- Heavy duty housing with solid milled aluminum
- Heating and cooling options
- Foot mounted
- Ethernet/IP, Profinet, Profibus, DeviceNet, Interbus and SSI options



### LLB65 & LLB500 LASER DISTANCE MEASUREMENT

- 65m range without reflector
- 500m range with reflector
- Extremely accurate across the entire range
- Analog, Serial, SSI and Profibus options

## PRESS MONITORING

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- Protect your stamping press and tooling
- Reduce rejected parts and down time
- Extend the life of your press

## FRAME AND FORK SENSORS

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- High resolution stamped part and slug detection
- Compressed air connection for contaminate free operation



## DOUBLE SHEET DETECTION

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- High performance ultrasonic double sheet detection
- Detect thin sheet metal stuck together by oil film



## SIL 3 SAFETY RATED ENCODERS

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Common for hoist and lift applications, TR can provide SIL rated rotary encoders for safety rated applications. These encoders provide a redundant internal positioning control and a safe output. They also include a standard incremental output so a second encoder doesn't need to be mounted if a non SIL rated position is also required.

## LED SIGNAL/MACHINE LIGHTS

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- High efficient vibration proof technology
- Break-proof polycarbonate cover and metal housing
- 100% water and oil tight – IP67



## OTHER HEAVY DUTY SOLUTIONS

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TR has a variety of other solutions for demanding applications:

- Encoder shock modules to isolate your precision encoder from excessive shock and vibration
- IP69K magnetic encoders for high temperature wash down applications
- Software programmable filter controlled ultrasonic sensors
- Inductive proximity switches including high temperature, long range and stainless steel versions
- Specialty couplings for demanding and harsh applications

**24/7/365** Technical Support

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