

# METAL DETECTOR

## METRON 05 VT

### RELIABLE DETECTION OF ALL METALS:

- FERROUS
- STAINLESS STEEL
- ALUMINUM
- COPPER
- BRASS
- .....

RELIABLE DETECTION OF FREE OR ENCAPSULATED CONTAMINANTS.

Version 05/18



### METAL DETECTOR FOR VIBRATORY CONVEYORS.

#### INDUSTRIES

- TIMBER INDUSTRY

#### APPLICATION

- MACHINERY PROTECTION E. G.:
- CHIPPERS
- .....



GLOBAL. MAGNETIC. FORCE.™

- NO „METAL FREE ZONE“ REQUIRED
- HIGHLY SENSITIVE TO FERROUS, NON-FERROUS AND STAINLESS STEEL
- QUICK AND EASY INSTALLATION
- USER FRIENDLY OPERATION
- MODELS TO FIT EVERY APPLICATION
- THE DATA SHEET CONTAINS ADDITIONAL INFORMATION AS TO THE AMD 05 (VERSION 5.2) ELECTRONICS

## MODELS

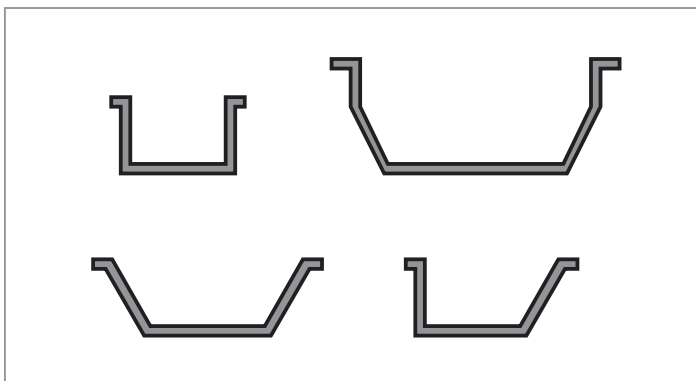


EXAMPLE 1



EXAMPLE 2

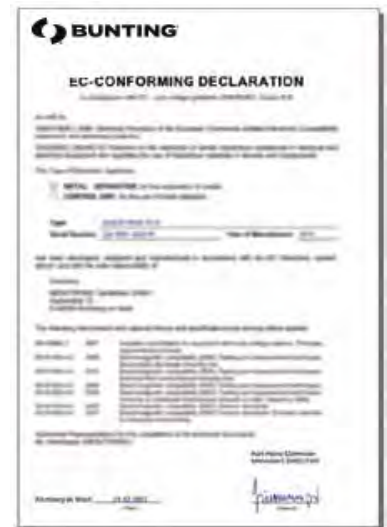
## SUMMARY



NO MATTER WHICH SHAPE YOUR TROUGH, **BUNTING** HAS THE RIGHT SIZE METAL DETECTOR!

## SCOPE OF DELIVERY

- DETECTOR HEAD
- ELECTRONICS MOUNTED IN A METAL CABINET
- INTERCONNECTING CABLES
- USER MANUAL INCL. INSTALLATION INSTRUCTIONS, WIRING DIAGRAM AND SPARE PARTS LIST IN SEVERAL LANGUAGES
- EG CONFORMITY DECLARATION



## OPTIONAL EQUIPMENT

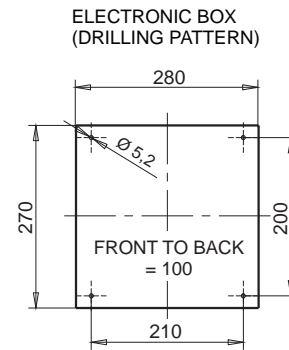
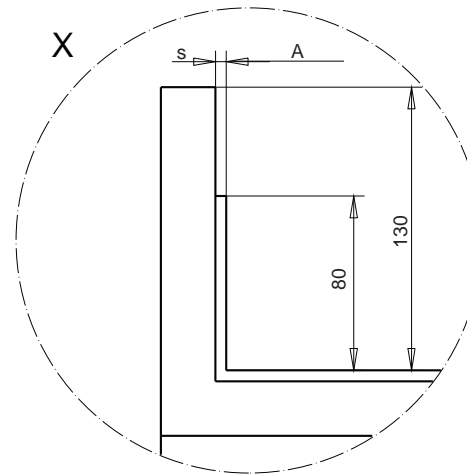
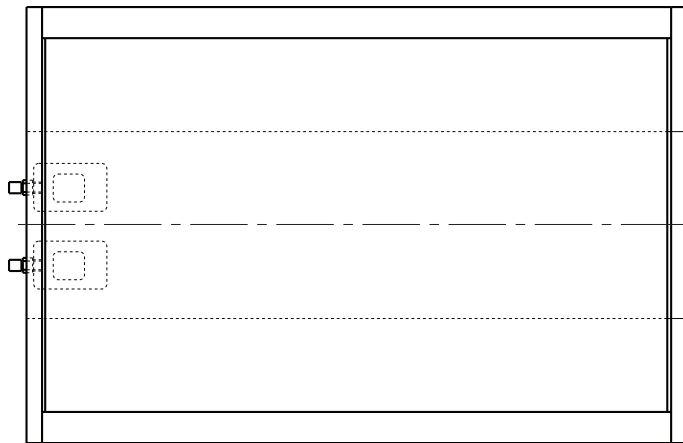
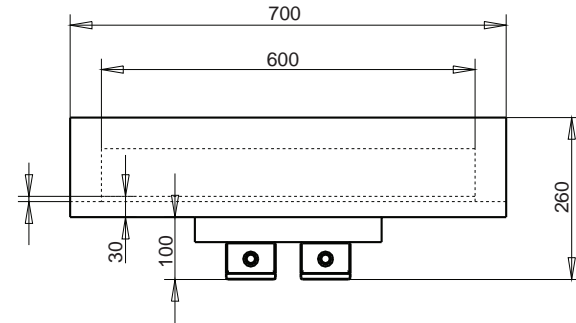
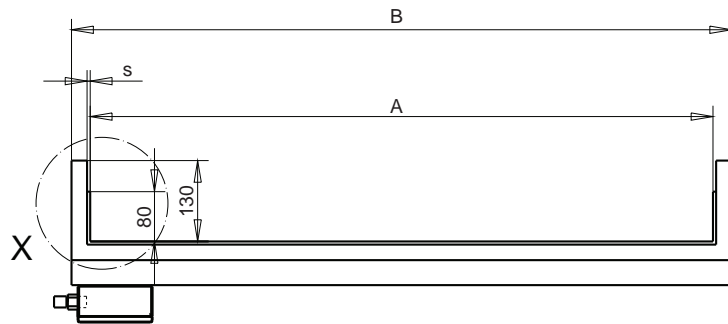
- WARNING DEVICE
  - BEACON
  - BUZZER
  - BEACON WITH SIREN
- REMOTE RESET DEVICE
- VISUAL MARKER
  - INK JET SYSTEM
- CUSTOMIZED SOFTWARE SOLUTIONS
  - SPECIAL CONTROL OPERATIONS
  - DATA TRANSFER
- POWER CONDITIONER
  - MAGNETIC VOLTAGE STABILIZER
  - ELECTRONIC VOLTAGE STABILIZER

## SPECIAL VERSIONS

- DETECTOR HEAD AND CONTROL BOX IN STAINLESS STEEL
- EXPLOSION PROOF (PROTECTION TYPE IP 65)
- CUSTOM PAINT
- SPECIAL POWER SUPPLY
- ALUTRON-VERSION (NO FALSE TRIPPING BY METALLIC FILMS SUCH AS CUP LIDS, .....), PATENT-NO. 4342826
- NEUTRAL DELIVERY WITH INDIVIDUAL LABELING



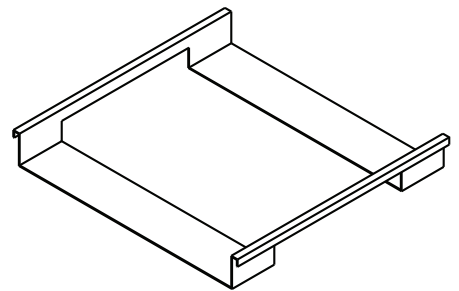
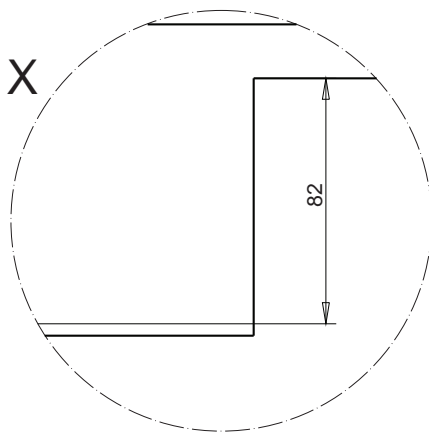
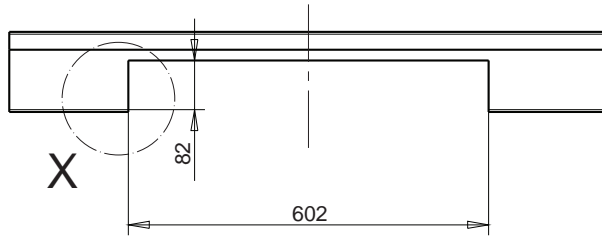
# DIMENSIONS



A (INNER TROUGH WIDTH) = 300-1000 MM  
 B (TOTAL WIDTH) = A + 60 MM  
 s (THICKNESS) = TROUGH SHEET THICKNESS

ALL DIMENSIONS IN MM. OTHER DIMENSIONS AVAILABLE.

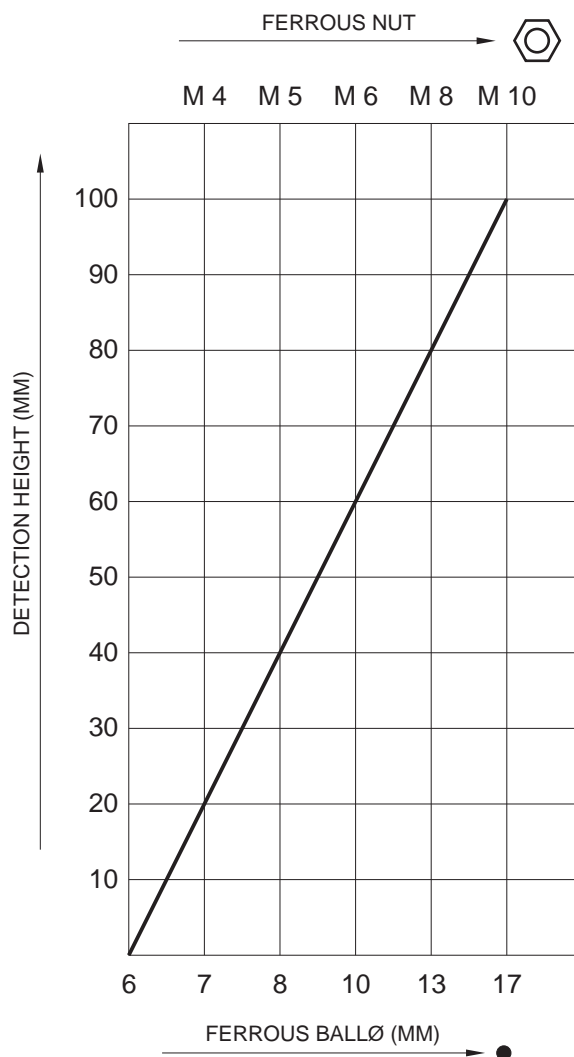
## INSTALLATION



- CUT THE TROUGH ACCORDING TO THE DRAWING.
- INSTALL THE SENSING COIL.
- ALLOW FOR MOVEMENT OF THE INTERCONNECTING CABLES (COIL TO ELECTRONICS). FORM A 20 CM (8") LOOP WITH THE TRANSMITTER/RECEIVER CABLES AT THE COIL END.

## SENSITIVITY DIAGRAM

THE SENSITIVITY IS DEPENDENT ON THE DISTANCE BETWEEN THE METAL CONTAMINANT AND THE SENSOR SURFACE. THE CLOSER THE CONTAMINANT IS TO THE SURFACE, THE HIGHER THE SENSITIVITY.



TYPICAL SENSITIVITY DIAGRAM FOR A 500 MM (20") WIDE DETECTOR COIL UNDER PROCESS CONDITIONS WITH WOOD WASTE.

THE IMPACT OF HEAVY LOGS MAY CREATE DISTURBANCES WHICH MAY REDUCE THE SENSITIVITY!

- THE SENSITIVITY AGAINST NON-FERROUS AND STAINLESS STEEL IS NEARLY IDENTICAL TO THE SENSITIVITY AGAINST FERROUS CONTAMINANTS!

## CONTROL UNIT AMD 05 (Version 5.2)

*ADVANTAGES THAT WILL CONVINC YOU!*

**SINGLE BOARD DESIGN** WITH BUILT IN REGULATED POWER SUPPLY FOR RELIABLE PERFORMANCE AND EASE OF SERVICE.

**AUTO-SETUP-ROUTINE** WITH INTERFERENCE SIGNAL SUPPRESSION AND AUTOMATIC SENSITIVITY CALIBRATION.

**MULTI-FILTER SYSTEM** USING DIGITAL FILTRATION FOR MAXIMUM STABILITY IN HARSH ENVIRONMENTS.

**AUTO-BALANCE** AUTOMATICALLY DETECTS AND COMPENSATES FOR ANY CHANGES IN THE SIGNAL DURING NORMAL OPERATION. (E.G. TEMPERATURE VARIATIONS)

**SELF MONITORING SYSTEM** ENSURES ALL IMPORTANT COMPONENTS ARE FUNCTIONING PROPERLY. IN CASE OF A FAULT, RELAY OUTPUTS ARE AVAILABLE. FAULTS ARE DISPLAYED AS TEXT IN REAL TIME.

**NARROW DETECTION ZONE** PROVIDES AN ACCURATE LOCATION OF THE METALLIC PARTICLE IN THE DETECTION FIELD ALLOWING PRECISE SEPARATION.

**TOUCHPAD CONTROLS** MODERN DESIGN. RUGGED TOUCHSCREEN FOIL WITH ERGONOMIC CONTROLS.

**4 BUTTON TOUCHPAD CONTROLS** SUPPORTED BY EASY TO UNDERSTAND MENUS FAST ACCESS TO ALL OPERATING PARAMETERS. USER SELECTABLE DIALOG LANGUAGE.

**5-LINE BACK-LIT LCD DISPLAY** WITH METAL SIGNAL INDICATION. ADDITIONAL LED INDICATOR LAMPS ARE BUILT IN TO INDICATE METAL DETECTION OR FAULTS.

**METAL COUNTER** CAN BE DISPLAYED ON THE LCD SCREEN OR INTERFACED WITH A PRINTER OVER A SERIAL INTERFACE.

**3-LEVEL PASSWORD PROTECTION** WITH INTER-CHANGEABLE CODE NUMBERS.



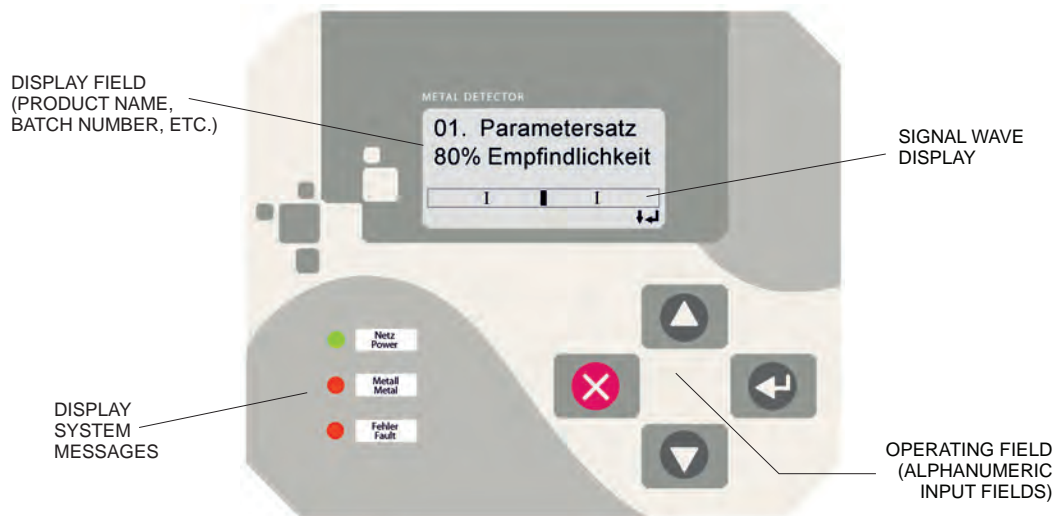
**METAL DETECTOR NETWORK AND REMOTE SERVICE** EVERYTHING IS DO-ABLE! SEVERAL OPTIONAL SOFTWARE-PACKAGES ARE AVAILABLE. EXAMPLE: WITH THE BUILT-IN CAN-BUS-DATA PORT A NETWORK OF UP TO 125 METAL DETECTORS / SEPARATORS CAN BE OPERATED. THE UNITS CAN THEN BE REMOTE CONTROLLED AND OPERATED VIA A CENTRAL PC. ALSO REMOTE DIAGNOSIS, PARAMETER CHANGE AND SOFTWARE UPDATES VIA MODEM ARE POSSIBLE.

**SERIAL DATA PORT** FOR DIFFERENT TASKS. THE METAL DETECTOR IS EQUIPPED WITH 1 SERIAL DATA PORT (RS 232). HOWEVER THIS PORT IS RESERVED FOR FACTORY SERVICE ACCESS SUCH AS ADJUSTMENT DATA LOGGING, SOFTWARE UPDATES ETC.) AS AN OPTION, THIS DATA PORT MAY ALSO BE USED BY THE CLIENT (SWITCHABLE). IT CAN BE USED TO DRIVE A LOCAL OR CENTRAL PROTOCOL PRINTER. THE PROTOCOL LAYOUT CONFORMS TO ISO 9000 AND HACCP GUIDELINES. BI-DIRECTIONAL DATA COMMUNICATION WITH CUSTOMER'S SPS OR PC SYSTEMS IS AVAILABLE (OPTIONAL SOFTWARE PACKAGE).

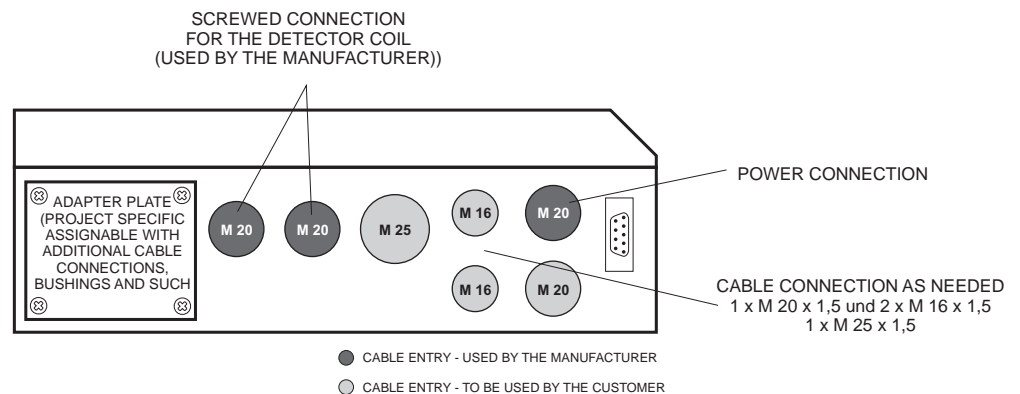
**PRODUCT STORAGE MEMORY BACKUP** FOR UP TO 500 INDIVIDUAL PRODUCTS. EACH PRODUCT HAS A COMPLETE SET OF ADJUSTMENT DATA ASSIGNED, SUCH AS SENSITIVITY, REJECT TIME ETC. THE DISPLAY OF TIME RELEVANT DATA IS IN REAL-TIME. INDIVIDUAL PRODUCT NAMES CAN BE STORED AS WELL.

## CONTROLS

EXAMPLE OF AN INPUT DISPLAY (DEPENDING UPON THE SELECTED MENU THE DISPLAY SHOWS DIFFERENT FUNCTIONS !)



## ELECTRONIC BOX



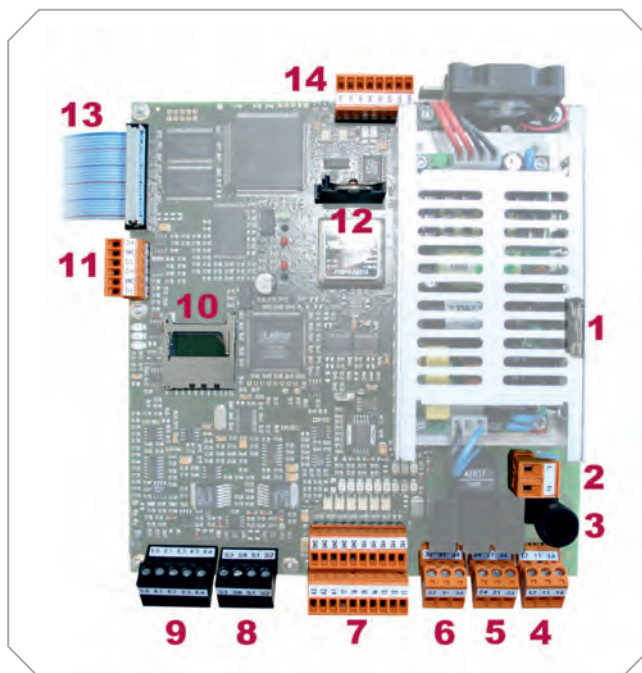
## TECHNICAL DATA

POWER SUPPLY:	100 – 240 V AC, 50/60 HZ
POWER CONSUMPTION:	MAX. 50 W
FUSE:	1,25 A (SLOW BLOW); 5 X 20 MM ACCORDING TO DIN
TYPE OF PROTECTION:	IP 66 (OPTIONAL IP 69K)
WORKING TEMPERATURE RANGE:	-10 °C TO +50 °C
STORAGE TEMPERATURE RANGE:	-10 °C TO +60 °C
REL. HUMIDITY:	0 - 95 % (WITHOUT CONDENSATION)
CONVEYING SPEED:	0,05 TO 1,5 M/SEC. (FASTER SPEED ON REQUEST)
PAINT:	RASPBERRY RED = RAL 3027
MATERIALS:	DETECTOR HEAD AND CONTROL BOX MADE OF STEEL (ST 37), SENSOR AREAS MADE OF DUROPLEX
CONTROL BOX:	INTERCONNECTING CABLE = 2 M LONG
POWER CABLE:	APP. 1,8 M CABLE WITH PLUG (TWO POLE AND EARTHING PIN) (US-VERSION WITH US-STANDARD PLUG)

OTHER VERSIONS AVAILABLE



## LAYOUT AMD 05



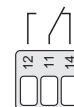
**1** SPARE FUSE

**2** POWER SUPPLY 100 - 240 VAC, 50/60 HZ



**3** DEVICE FUSE 1,25 A (SLOW BLOW) 5 x 20 MM ACCORDING TO DIN

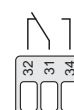
**4** RELAY 1 (SWITCHES NORMALLY ON METAL)  
 POTENTIAL FREE CONTACT  
 FROM FACTORY (IF NOT REQUESTED OTHERWISE)  
 RELAY 1 IS DESTINATED AS METAL-RELAY  
 MAX. CONTACT LOAD: 250 V/3 A



**5** RELAY 1 (SWITCHES NORMALLY ON OPERATION)  
 POTENTIAL FREE CONTACT  
 ASIDE FROM THE OPTICAL DISPLAY A POTENTIAL FREE  
 CONTACT IS AVAILABLE TO POLL THE UNIT CONDITION  
 MAX. CONTACT LOAD: 250 V/3 A



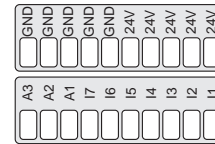
**6** RELAY 3 (TO BE CONFIGURED BY THE MANUFACTURER)  
 POTENTIAL FREE CONTACT  
 MAX. CONTACT LOAD: 250 V/3 A



## LAYOUT AMD 05

- 7** SEVEN (7) FREE PROGRAMABLE INPUTS (24V DC)  
AND THREE (3) FREE PROGRAMABLE OUTPUTS (24V DC)

In1 - INITIATOR / BUTTON „NORMAL POSITION“  
In2 - INITIATOR / BUTTON „EJECT POSITION“  
In3 - AIR PRESSURE MONITOR (PRESSURE SWITCH)  
In4 - INPUT LIGHT BARRIER  
In5 - POSITION SENSOR  
In6 - EXTERNAL RESET BUTTON  
In7 - NOT CONNECTED



THREE (3) FREE PROGRAMABLE OUTPUTS (24V DC)  
OUTPUTS (STANDARD LAYOUT)  
OUT 1 - 24 V OUTPUT METAL  
OUT 2 - 24 V OUTPUT READY  
OUT 3 - NOT CONNECTED

ADDITIONAL CONTACT POSSIBILITIES: LEVEL SENSORS AND MORE

MAX. LOAD FOR ALL INPUTS AND OUTPUTS  $I_{TOTAL} \leq 300$  MA CUMULATIVE!

- 8** CONNECTION SENDER (USED BY FACTORY)  
**9** CONNECTION RECEIVER (USED BY FACTORY)  
**10** SLOT FOR SD MEMORY CARD  
**11** CAN – BUS DATA PORT  
**12** BATTERY  
**13** CONNECTION DISPLAY (USED BY FACTORY)  
**14** SERIAL DATA PORT (USED BY FACTORY)

### **Service and Calibration**

Bunting service engineers are available at short notice to service and calibrate our full range of detectors in the UK and overseas. Bunting offers 3 levels of protection designed to provide specific services to optimise the performance and lifespan of metal detection equipment

#### **Pro-Start™**

Pro-Start™ commissioning coverage ensures that a metal detector performs to company expectations from its first day on the job. A factory-trained service technician will be on-site to verify the installation, calibrate the metal detector to achieve top performance and train personnel. Pro-Start includes a calibration label for the detector, a complimentary set of test pieces (specify size and type on purchase) and a detailed calibration record for company files. It also extends the original one-year factory warranty to two years and includes two years of phone-based technical support.

#### **Pro-Maintenance™**

Pro-Maintenance™ keeps the metal detector operating like new, which is critical, considering the impact of poor performance on customer satisfaction and other consequences. It provides either annual (Gold plan) or biannual (Platinum plan) visits by factory-trained service technicians to service and calibrate the metal detector and ensure the system is running the latest accurate software. The Pro-Maintenance plan also includes significant parts and labour discounts on any needed spares and repair work, on-site training for personnel during service & calibration visits and two years of phone based technical support.



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