

METAL DETECTOR

METRON 05 PowerLine

RELIABLE DETECTION OF ALL METALS:

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

RELIABLE DETECTION OF FREE OR ENCAPSULATED CONTAMINANTS.

Version 06/21



THE WORLD'S ONLY METAL DETECTOR THAT CAN BE DIRECTLY INTEGRATED INTO PNEUMATIC FIBER CONVEYING SYSTEMS WITHOUT THE USE OF A SENSING TUBE. THIS ASSURES COMPLETE SHIELDING AGAINST EXTERNAL INTERFERENCES.

INDUSTRIES

- TEXTILE INDUSTRY

APPLICATION

- MACHINERY PROTECTION E.G. CARD CLOTHING CARDING MACHINES

www.mesutronic.de

MESUTRONIC

Metal Detection made in Germany

CONVINCING ARGUMENTS



INTERFERENCE SHIELD – MULTILAYER ENCAPSULATED DETECTOR COIL WITH WELDED PIPE CONNECTIONS.

ELIMINATES FALSE REJECTS CAUSED BY EXTERNAL INTERFERENCE SOURCES!



QUICK MOUNT – THE SINGLE COMPONENT SENSOR UNIT CAN BE MOUNTED DIRECTLY TO THE EXISTING PIPES WITH QUICK CONNECT CLAMPS OR FLANGES.

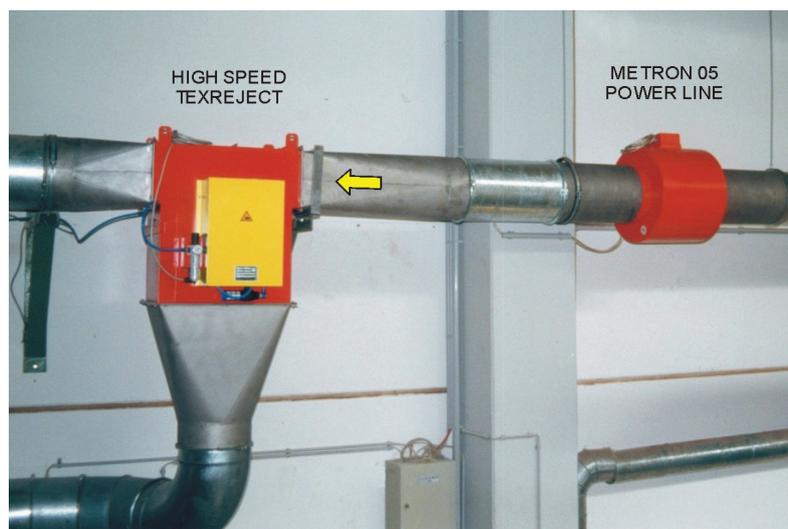
QUICK AND EFFICIENT INSTALLATION!



POSITIVE SPEED CONTROL – PSC CALCULATES THE CONTAMINANT SPEED FOR PRECISE OPENING TIME AND DURATION OF THE EJECT GATE.

REDUCES GOOD MATERIAL LOSS TO A MINIMUM!

- SYSTEM SOLUTIONS ARE AVAILABLE FOR ALL COMMON PIPE DIAMETERS. STANDARD: 250, 300, 350, 400 MM; ADAPTERS FOR OTHER DIAMETERS ARE AVAILABLE.
- THE ELECTRONICS CAN BE MOUNTED SEPARATE FROM THE COIL IN ACCESSIBLE LOCATIONS. THE SYSTEM IS ALSO AVAILABLE WITH AN INTEGRATED ELECTRONICS CABINET, IF DESIRED
- OPTIONAL EQUIPMENT: „HIGH SPEED TEXREJECT“, A FAST ACTING EJECT GATE. THE METRON 05 BUILDS EXTREMELY COMPACT DUE TO THE EXTREMELY SHORT EJECT CYCLE AND CAN BE EASILY INTEGRATED INTO MOST CONVEYING SYSTEMS.
- THE DATA SHEET CONTAINS ADDITIONAL INFORMATION AS TO THE AMD 05 (VERSION 5.2) ELECTRONICS.



A COMPLETE SYSTEM INSTALLED IN A FIBER TRANSPORT PIPE WITH 300 MM DIAMETER

STANDARD EQUIPMENT

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



OPTIONAL EQUIPMENT

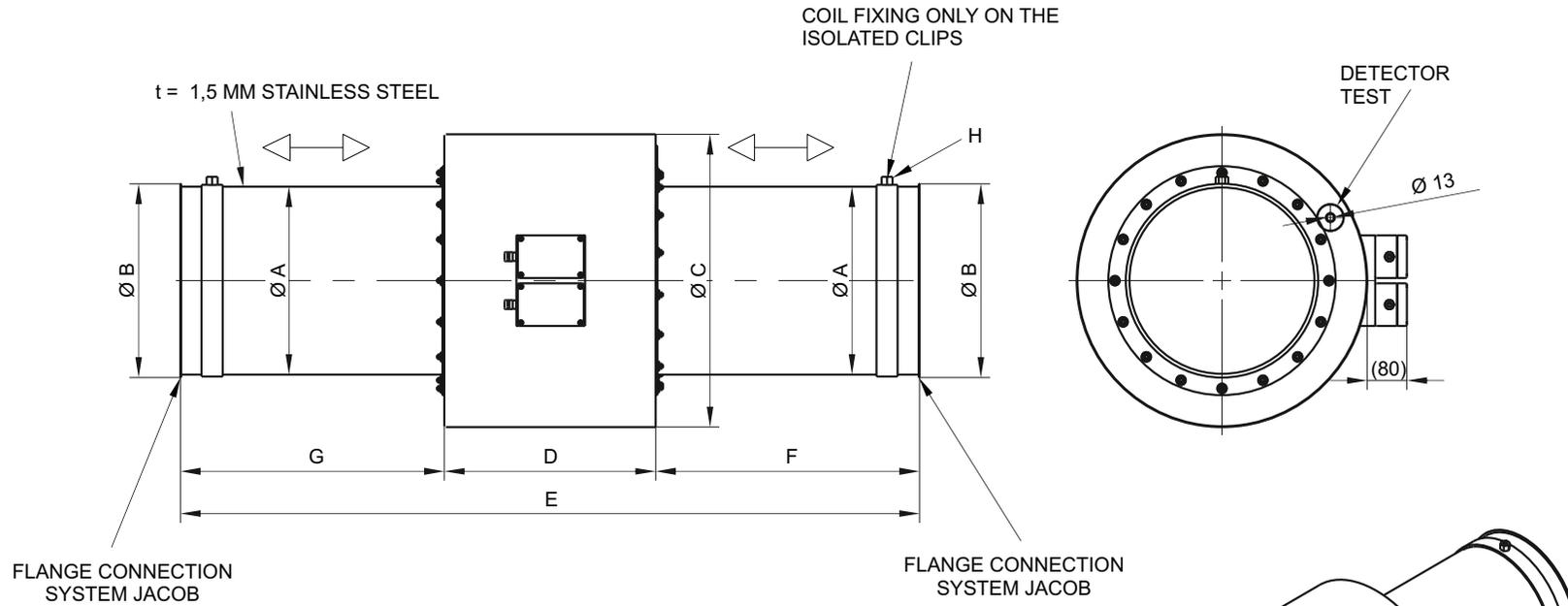
- AUTOMATIC REJECT SYSTEM
 - FAST SWITCHING EJECT GATE „HIGH SPEED TEXREJECT“
- "BAD MATERIAL" CONTAINER
 - FOR PRESSURIZED CONVEYING SYSTEMS
 - FOR VACUUM CONVEYING SYSTEMS
- TEST WAND
 - PLASTIC WAND (L = 1 M) WITH APPROPRIATE FERROUS TEST SPHERE
- WARNING DEVICE
 - BEACON
 - BUZZER
 - BEACON WITH SIREN
- ADDITIONAL FILTERS
 - MAGNETICALLY OPERATED VOLTAGE STABILIZERS
 - ELECTRONICALLY OPERATED VOLTAGE STABILIZERS

SPECIAL VERSIONS

- INTEGRATED CONTROL UNIT
- SPECIAL PAINT
- SPECIAL VOLTAGE
- PRIVATE LABELING OF EQUIPMENT

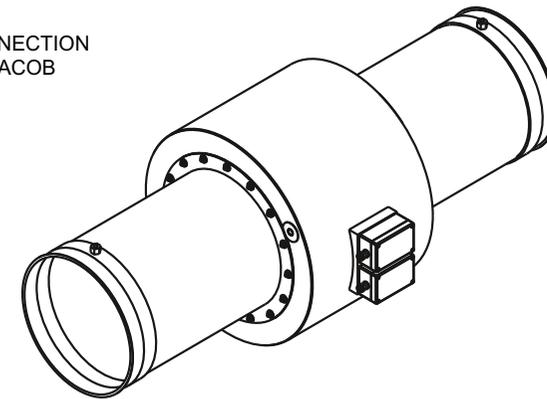


DIMENSIONS



A	B	C	D	E	F	G	H	WEIGHT (KGS)
220	234	450	350	1400	525	525	M 8	40
250	264	450	350	1400	525	525	M 8	40
300	314	500	400	1400	500	500	M 8	45
350	364	550	400	1400	500	500	M 8	55
400	414	600	450	1400	475	475	M 8	75
630	664	850	700	2200	650	850	M 10	150

ALL DIMENSIONS IN MM.



SENSITIVITY

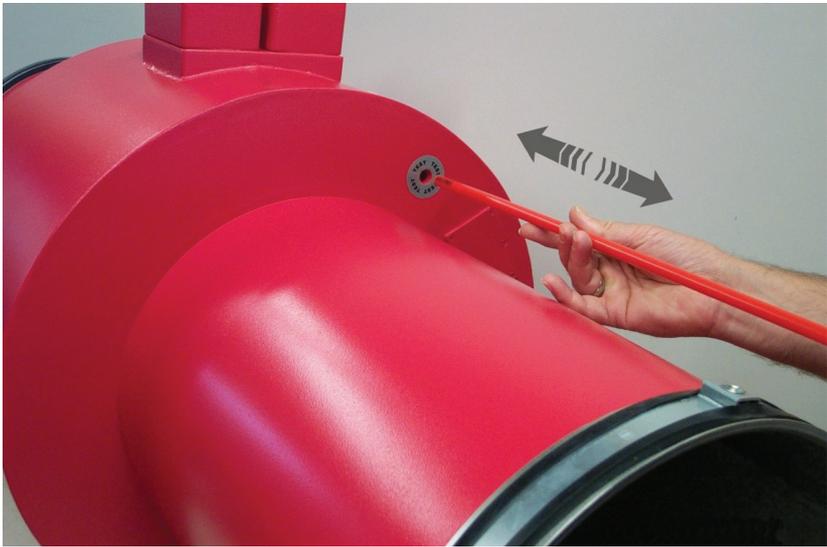
TYPE DIAMETER	FE-BALL Ø MM
220	2,5
250	2,5
300	3,0
350	3,2
400	4,0
630	6,0

THE STATED SENSITIVITY VALUES ARE TYPICAL VALUES ACHIEVED UNDER PRODUCTION CONDITIONS (NOT LABORATORY VALUES!), WHICH WE GUARANTEE UNDER NORMAL PRODUCTION CONDITIONS.

THE SENSITIVITY IS ADJUSTABLE OVER A WIDE RANGE AND CAN BE REDUCED IF DESIRED.

TO CALCULATE SENSITIVITY FOR OTHER METALS USE THE FOLLOWING MULTIPLICATION FACTOR:

VA (STAINLESS-STEEL) = FE-BALL x 1 TO 2 (FACTOR DEPENDS ON THE METAL ALLOY)
CU, ALU, BRASS, ... = FE-BALL x 1,2 TO 1,5 (FACTOR DEPENDS ON THE METAL TYPE)



THE FUNCTION OF THE FULLY ENCAPSULATED DETECTION COIL CAN BE EASILY TESTED THRU THE TEST PORT. MESUTRONIC DELIVERS (OPTIONAL) 1 METER TEST WANDS WHICH HAVE THE APPROPRIATE TEST SPHERES EMBEDDED IN THE TIP. THE TEST WAND IS INSERTED MANUALLY THRU THE TEST PORT WITH THE APPROPRIATE SPEED (SEE PICTURE ABOVE).

CONTROL UNIT AMD 05 (Version 5.2)

ADVANTAGES THAT WILL CONVINCE 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 PARAMETERES. 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.



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.

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

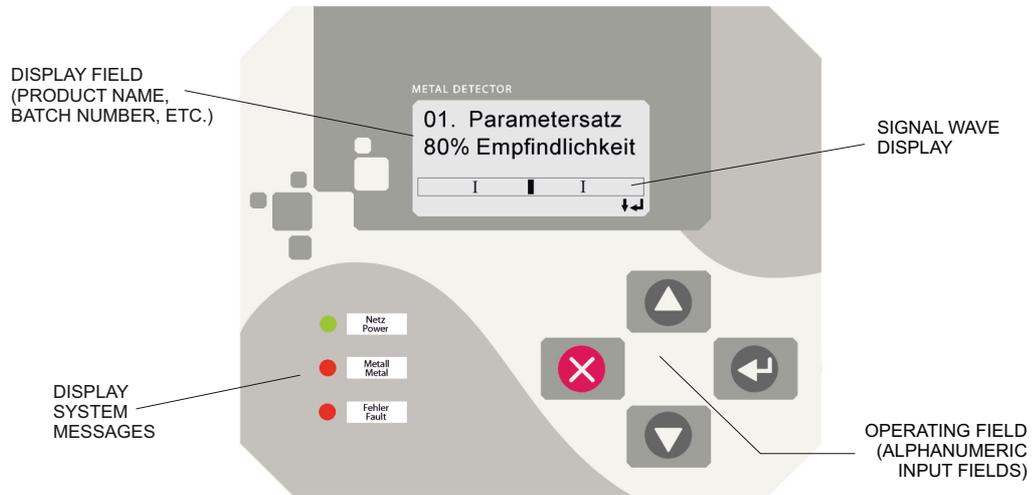
FOR DIFFERENT TASKS, THE METAL DETECTOR IS EQUIPPED WITH 1 SERIAL DATA PORT (RS 232). HOWEVER THIS PORT IS RESERVED FOR FACTORY SERVICE ACCESS SUCH AS ADJUSTMENT DATA LOGGING, SOFTWARE UPDATES ETC.) AS AN OPTION, THIS DATA PORT MAY ALSO BE USED BY THE CLIENT (SWITCHABLE). IT CAN BE USED TO DRIVE A LOCAL 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).

ACTIVE QUALITY ASSURANCE

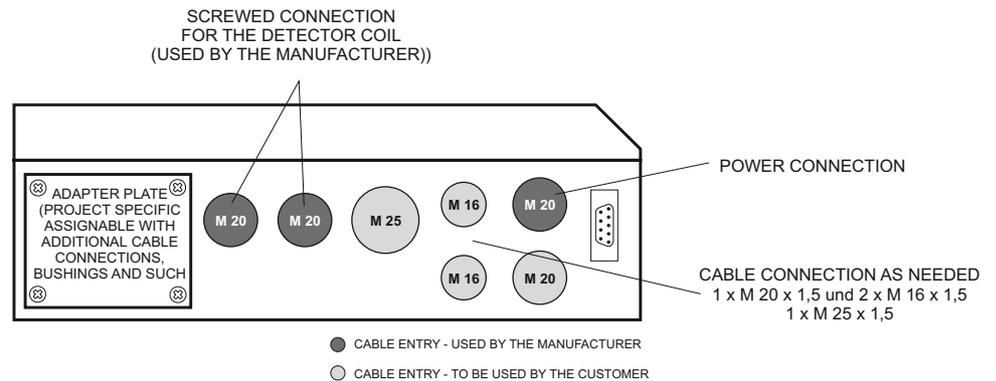
WITH SMD COMPONENTS SAVE NOT ONLY SPACE BUT ALSO ASSURE OPTIMUM QUALITY AND SAFETY FOR THE END USER. WITH AUTOMATED PLACEMENT COMPONENT ERRORS ARE ELIMINATED. IN ADDITION EACH CARD IS 100% TESTED AND ARTIFICIALLY AGED. ALL MESUTRONIC PRODUCTS ARE DEVELOPED UNDER DIN, EN AND UUV STANDARDS AND COMPLY WITH THE STRICT CE STANDARDS AS WELL.

CONTROLS

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



ELECTRONIC BOX

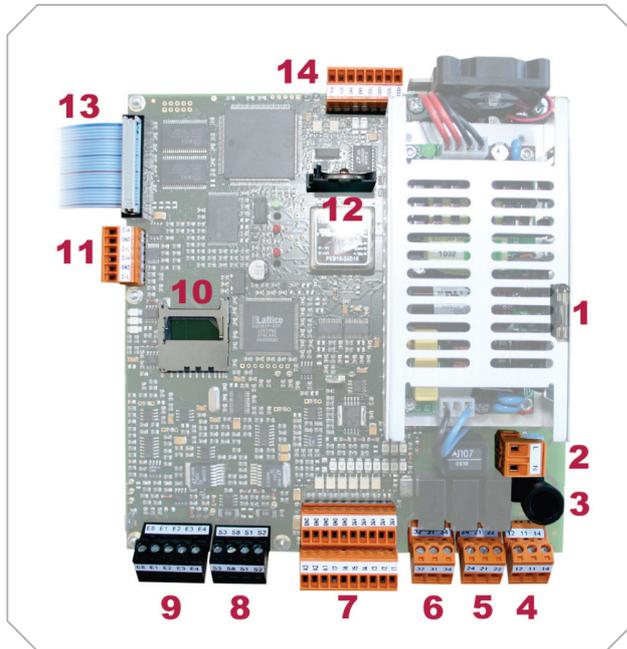


TECHNICAL DATA

POWER SUPPLY:	100 – 240 VAC, 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 54
WORKING TEMPERATURE:	- 10° C TO + 50° C
STORAGE TEMPERATURE:	- 10° C TO + 60° C
REL. HUMIDITY:	0 - 95 % (WITHOUT CONDENSATION)
CONVEYING SPEED:	0,5 TO 30 M/SEC.
PAINTED:	STRUCTURE PAINT RAL 3027
MATERIAL:	DETECTION HEAD IS MADE OF STAINLESS STEEL (1.4301) ELECTRONIC CABINETS IS MADE OF STEEL (ST 37) SENSING AREAS ARE MADE OF DUROPLEX
CONNECTING CABLE:	DETECTION COIL / ELECTRONIC = 7 M
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

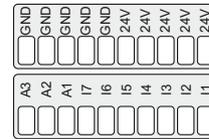


- 1** SPARE FUSE
- 2** POWER SUPPLY 100 - 240 VAC, 50/60 HZ 
- 3** DEVICE FUSE 1,25 A (SLOW BLOW) 5 x 20 MM ACCORDING TO DIN
- 4** RELAY 1 (SWITCHES NORMALLY ON METAL)
 POTENTIAL FREE CONTACT
 FROM FACTORY (IF NOT REQUESTED OTHERWISE)
 RELAY 1 IS DESTINATED AS METAL-RELAY
 MAX. CONTACT LOAD: 250 V/3 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)

MESUTRONIC Gerätebau GmbH

A TEAM OF SPECIALISTS DEDICATED TO DEVELOP, MANUFACTURE AND MARKET THE WORLD'S FINEST ELECTRONIC METAL DETECTION AND SEPARATION EQUIPMENT FOR ALL INDUSTRIES. IT IS OUR GOAL TO PROVIDE THE OPTIMUM SOLUTION TO MEET EVERY CRITERIA. MANY YEARS OF EXPERIENCE PROVIDING HUNDREDS OF DETECTION COILS WITH VARIOUS CONTROLS AS WELL AS A MULTITUDE OF MECHANICAL SEPARATING AND SORTING COMPONENTS ARE AT YOUR DISPOSAL. WE POOL OUR KNOWLEDGE AND EXPERIENCE TO OFFER A SOLUTION TO VIRTUALLY ANY APPLICATION.

„WHEN OTHERS SAY NO, WE SAY LETS GO!“

LET OUR TEAM PROVIDE YOU WITH THE OPTIMUM SOLUTION FOR YOUR METAL CONTAMINATION.

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MESUTRONIC

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