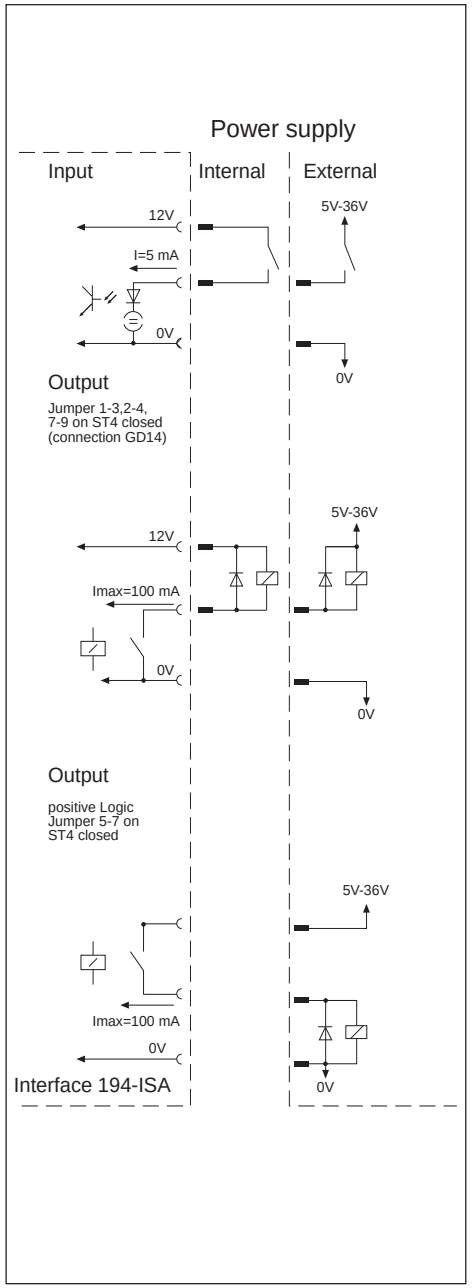
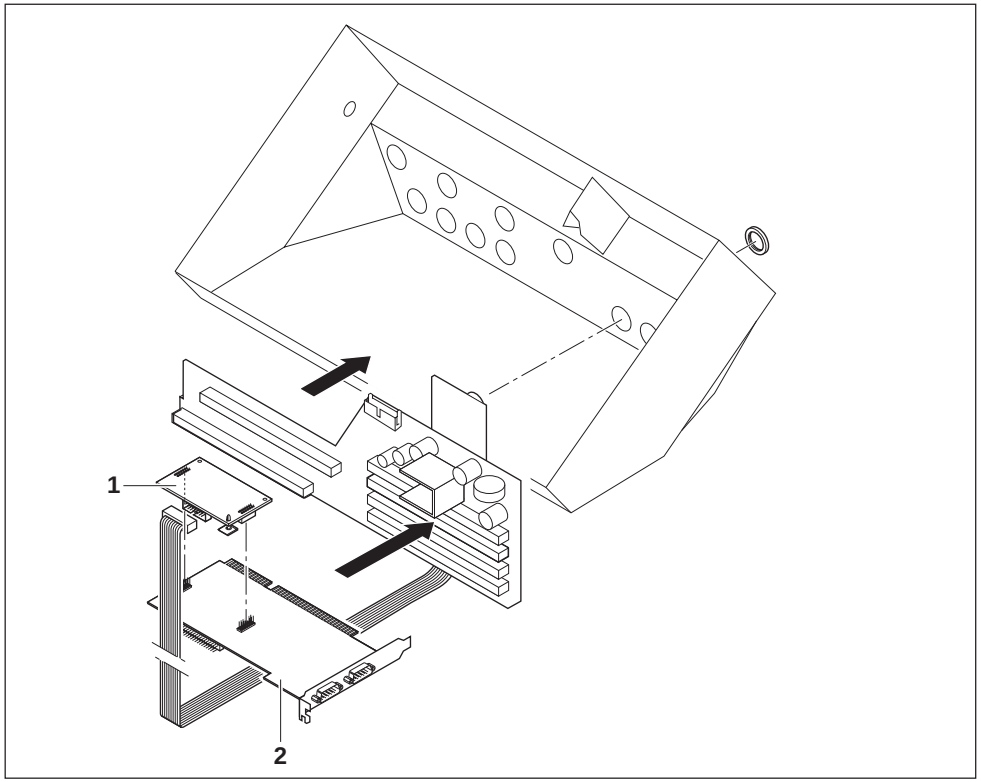


- External power supply, negative logic
  (Output voltage 5-36 V DC,
  jumper 7-9 on ST4 closed)
  Logic "1" = relay coil without current
  Logic "0" = relay coil with current
- External power supply, positive logic
  (Output voltage 5-36 V DC,
  jumper 5-7 on ST4 closed)
  Logic "1" = relay coil with current
  Logic "0" = relay coil without current

Note
The inputs and the external supply voltage may be assigned only a "Functional extra-low voltage with a save separation" of max. 36 V DC following DIN VDE 0160.

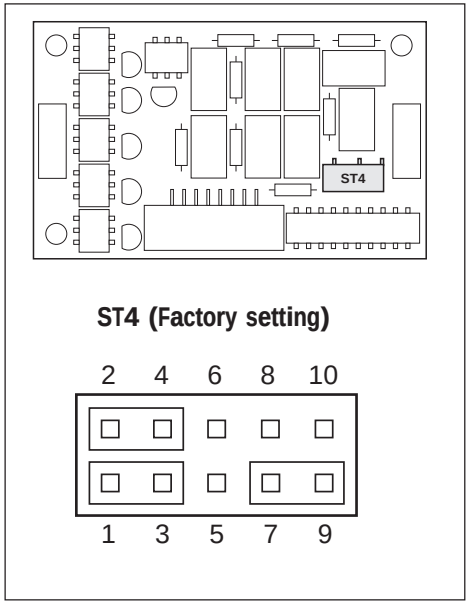
2 Installation



2.1 Fitting

- Switch off terminal, disconnect power plug.
- Unscrew 3 screws on underside of cover at the front, lift off cover and place face down in front of terminal.
- Undo ring nut of the interface socket.
- Lead interface socket outward, screw on ring nut from the outside and tighten. Ensure correct seating of the rubber ring seal.
- Fit mounting clips on the 194-ISA interface (1).
- Insert 194-ISA interface into the weighing interface (2).
- Plug cable into the interface board.
- Insert weighing interface into the backplane.
- Engage cover from the back with 3 screws and fasten underside of cover at front.

2.2 Setting and connecting the output voltage



2.2.1 Connecting METTLER TOLEDO GD14 Relay Interface

- Make sure that the following jumpers are connected on the ST4 (factory setting): 1-3, 2-4, and 7-9.

The GD14 relay interface is attached to the 19 pole output plug (see Chapter 3).

2.2.2 Attaching to control circuit (e. g. SPC)

The external supply voltage must be fed through the GD14 connection cable or a connection cable prepared by the user (see Chapter 3) to the 19 pole output socket (V+, V–).

Jumper on ST4 for negative logic

The activated output has 0V potential at this setting

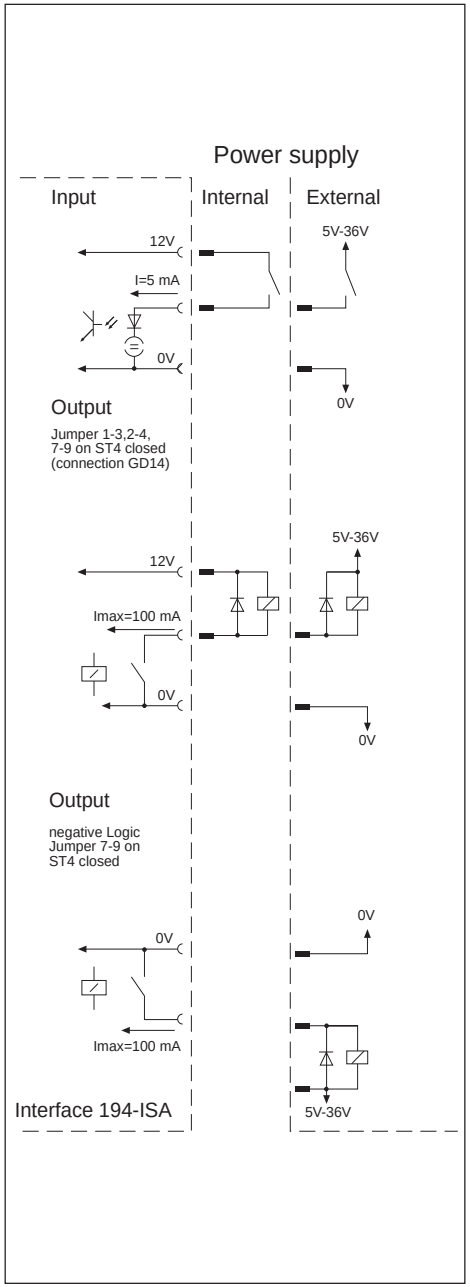
- 7-9 closed — all other jumpers open
- V+ (black) — connection to +potential of the supply voltage
- V– (violet) — connection to 0V potential of the supply voltage

Jumper on ST4 for positive logic

The activated output has +potential at this setting

- 5-7 closed — all other jumpers open
- V+ (black) — connection to 0V potential of the supply voltage
- V– (violet) — connection to +potential of the supply voltage

3 Technical data



3.1 I/O ports

Inputs

- 6 optocoupler inputs, electrically isolated
- Supply voltage
  Internal 12 V DC
  External 5 - 36 V DC
  I = 5 mA (internal current limitation)
- Signal level
  Logic "1" = optocoupler with current
  Logic "0" = optocoupler without current

Outputs

- 8 outputs, relay contacts, electrically isolated, make contacts with a common contact connection
- Supply voltage
  Internal 12 V DC
  External 5 - 36 V DC
  Imax = 100 mA (per output)
- Lifetime of the contacts
  Circuits with 24 V DC/100 mA
  2×10^7
  mechanical lifetime
  1×10^8
  Switching rate max. 10 Hz

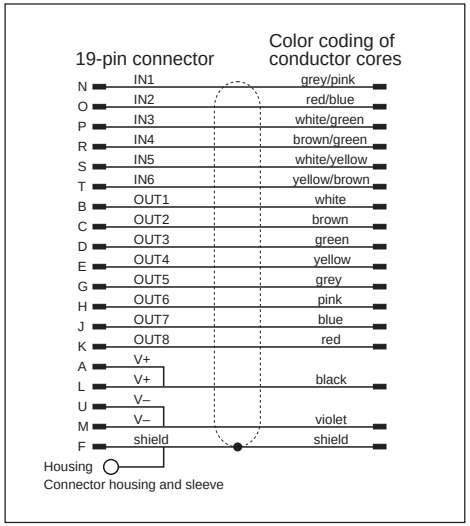
Output signal level

- Connection GD14, negative logic
  (Output voltage 12 V DC, jumper 1-3, 2-4 and 7-9 on ST4 closed)
  Logic "1" = relay coil without current
  Logic "0" = relay coil with current

3.3 Connectors of the I/O ports

19-pin round connector, socket.
Appropriate adapter, see optional equipment.

Pin assignment Interface 194-ISA

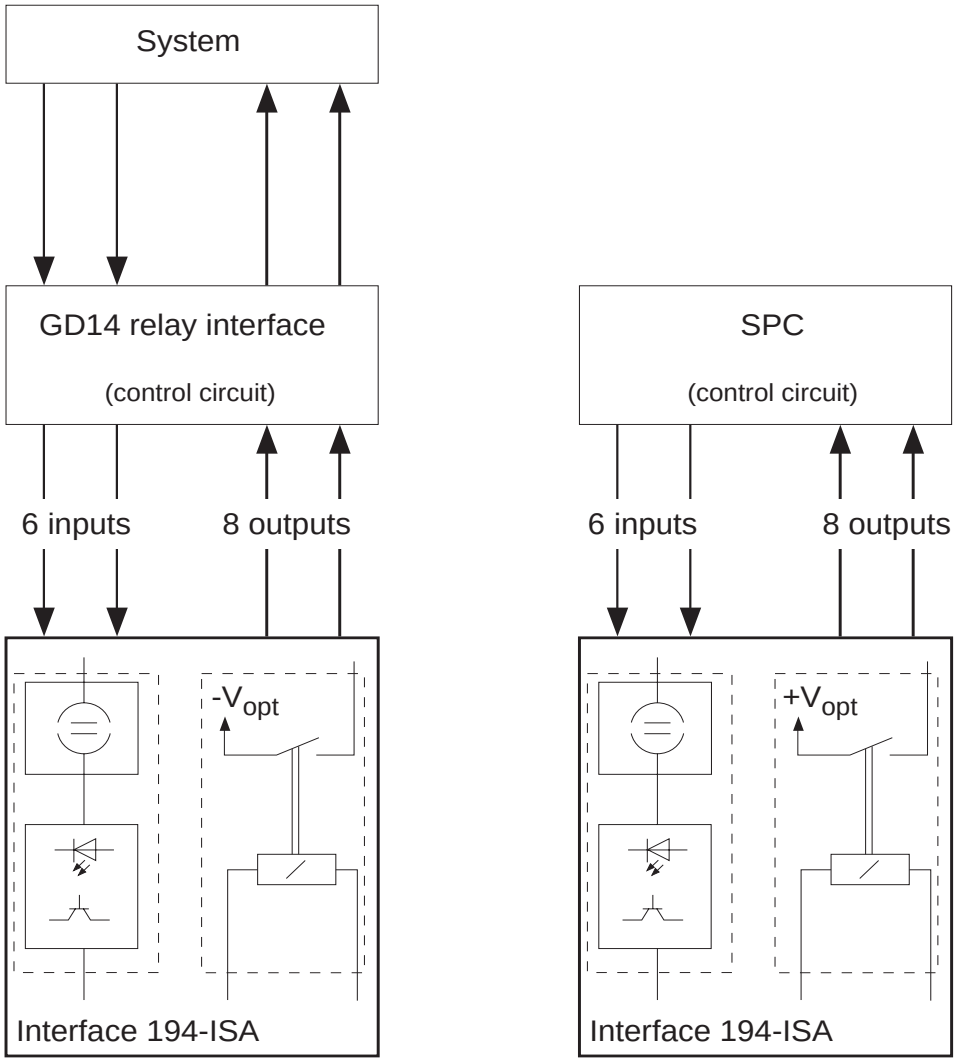


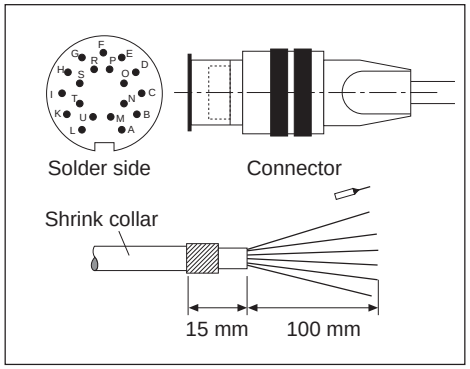
Pin A:	V+
Pin B:	Output 1
Pin C:	Output 2
Pin D:	Output 3
Pin E:	Output 4
Pin F:	not assigned
Pin G:	Output 5
Pin H:	Output 6
Pin I:	Output 7
Pin K:	Output 8
Pin L:	V+
Pin M:	V–
Pin N:	Input 1
Pin O	Input 2
Pin P:	Input 3
Pin R:	Input 4
Pin S:	Input 5
Pin T:	Input 6
Pin U:	V–

Contents

1. Introduction

Interface 194-ISA is an I/O interface for the METTLER TOLEDO ID20/ID20-... Weighing Terminals. The I/O ports are used for the open-loop and/or closed-loop control of signal transfer with external devices (e. g. SPC, METTLER TOLEDO GD14 Relay Interface).
The interface 194-ISA has an output section with 8 relay circuits for the activation of control circuits and an input section with 6 matching circuits for the receipt of signals.





3.2 Technical data of the connection cable

Connection possibility of Interface 194-ISA to control circuits (e. g. METTLER TOLEDO GD14 Relay Interface, SPC).

Cable of length 10 m (ME-504 458):
Comprising
- Male connector 19-pin and
- cable 4/Y-2p-FC11Y; 16 x 0.25; black; RAL 9005, shielded

Cables of length greater than 10 m up to max. 50 m
Can be prepared from
- Male connector 19-pin, (ME 504 461)
- Cable 4/Y-2p-FC11Y; 16 x 0.25; black; RAL 9005, shielded
- Cable end:
  Wind 3 strips of shielding braid to make a strand and pull on a shrink collar. Strip insulation from conductor cores and fit with wire-end ferrules, type 0.25/10.

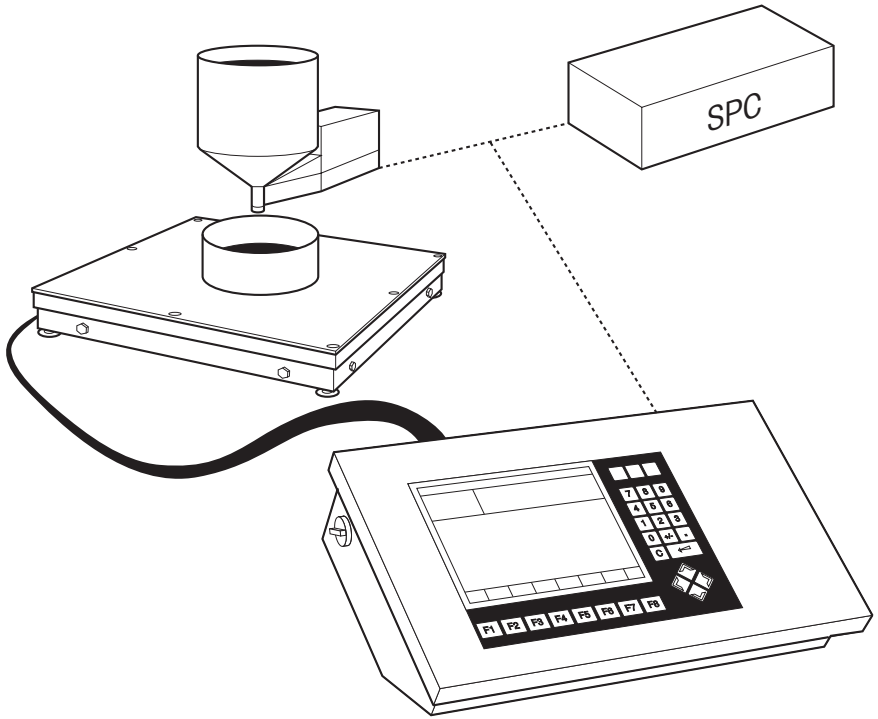
With every connection cable, note the following
- Connect both cable ends of the shielding on both sides to ground potential.
- Route cable separate from power lines.
- Separation of the cable from equipment of power electronics.

Operating instructions

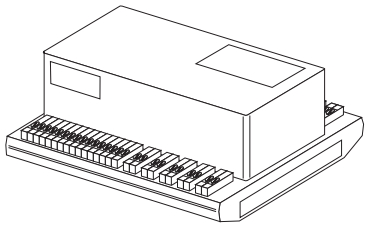
METTLER TOLEDO MultiRange Interface 194-ISA

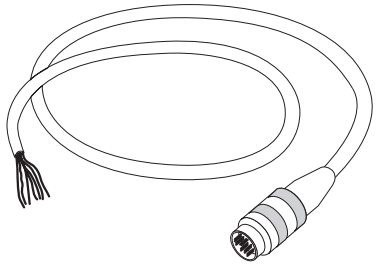
METTLER TOLEDO

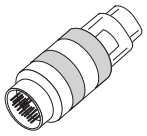
Mettler-Toledo (Albstadt) GmbH	**D-72458 Albstadt**	**T ++49-7431-14 0**	**F -14 232**
AT	**Mettler-Toledo Ges.m.b.H.**	1100 Wien	T ++43-1-604 19 80	F -604 28 80
AU	**Mettler-Toledo Ltd.**	Victoria 3207	T ++61-3-9646 45 51	F -9645 39 35
BE	**N.V. Mettler-Toledo S.A.**	1651 Lot	T ++32-2-334 02 11	F -378 16 65
CH	**Mettler-Toledo (Schweiz) AG**	8606 Greifensee	T ++41-1-944 45 45	F -944 45 10
CN	**Mettler-Toledo (Shanghai) Ltd.**	Shanghai 200233	T ++86-21-6485 0435	F -6485 3351
CZ	**Mettler-Toledo spol, s.r.o.**	120 00 Praha 2	T ++42-2-252 755	F -242 475 83
DE	**Mettler-Toledo GmbH**	35353 Giessen	T ++49-641-50 70	F -507 129
DK	**Mettler-Toledo A/S**	2600 Glostrup	T ++45-43 27 08 00	F -43 27 08 28
ES	**Mettler-Toledo S.A.E.**	08038 Barcelona	T ++34-3 223 22 22	F -223 02 71
FR	**Mettler-Toledo s.a.**	78220 Viroflay-Cedex	T ++33-1-30 97 17 17	F -30 97 16 00
HK	**Mettler-Toledo (HK) Ltd.**	Kowloon, Hongkong	T ++852-2744 1221	F -2744 6878
HR	**Mettler-Toledo d.o.o.**	100 00 Zagreb	T ++38-5-512 336 317	F -512 336 317
HU	**Mettler-Toledo Keresked. KFT**	1173 Budapest	T ++36-1-257 98 89	F -256 21 75
IT	**Mettler-Toledo S.p.A.**	20026 Novate Milanese	T ++39-2-33 33 21	F -356 2973
JP	**Mettler-Toledo K.K.**	Osaka 540	T ++81-6-949 5917	F -949 5944
KR	**Mettler-Toledo (Korea)**	Seoul 135-080	T ++82-2-518 2004	F -518 0813
MY	**Mettler-Toledo (M)**	47301 Petaling Jaya	T ++60-3-703 2773	F -703 8773
NO	**Mettler-Toledo A/S**	1008 Oslo 10	T ++47-22-30 44 90	F -32 70 02
NL	**Mettler-Toledo B.V.**	4000 HA Tiel	T ++31-344-63 83 63	F -63 83 90
PL	**Mettler-Toledo Sp.z.o.o.**	02-929 Warszawa	T ++48-22-651 92 32	F -42 20 01
RU	**Mettler-Toledo AO**	101000 Moscow	T ++7-095-921 92 11	F -921 63 53
SE	**Mettler-Toledo AB**	120 08 Stockholm	T ++46-8-702 50 00	F -642 45 62
SG	**Mettler-Toledo (S) Pte. Ltd.**	Singapore 139944	T ++65-778 67 79	F -778 66 39
SK	**Mettler-Toledo spol, s.r.o.**	831 03 Bratislava	T ++421-7-522 74 96	F -522 73 97
SL	**Mettler-Toledo d.o.o.**	611 11 Ljubljana	T ++386-61-123 5764	F -274 575
TH	**Mettler-Toledo (Thailand)**	Bangkok 10310	T ++66-2-719 64 80	F -719 64 79
TW	**Mettler-Toledo (Taiwan)**	Taipei	T ++886-2-579 5955	F -579 5977
UK	**Mettler-Toledo Ltd.**	Leicester, LE4 1AW	T ++44-116-235 70 70	F -236 63 99
US	**Mettler-Toledo Inc.**	Worthington, Ohio 43085	T ++1-614-438 4511	F -438 4755
US	**Mettler-Toledo Inc.**	Hightstown, NJ 08520	T ++1-609-448 3000	F -586 5451
Other countries: Mettler-Toledo AG		CH-8606 Greifensee	T ++41-1-944 22 11	F -944 31 70



4 Optional equipment







	Order No.
GD14 Relay Interface	00 504 371
Interface 194-GD14 connection cable, length 10 m	00 504 458
Male connector, 19-pin	00 504 461