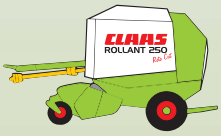
CLAAS



ROLLANT 240
ROLLANT 250

ROLLANT 240 with UNIWRAP
ROLLANT 250 with UNIWRAP

Technical Systems

Electric System

SERVICE & PARTS

Layout of electric circuit diagrams

Following the circuit diagram layout, all electric circuits are shown in individual circuit diagrams. Some explanations are given below to illustrate the layout.

Numbering of circuit diagrams

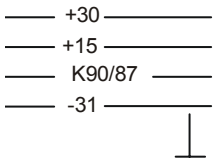
01...

- The respective numbering can be found on the corresponding cover sheet and in the footer.

01a / 01b ...

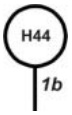
- Depending on the machine no., the components fitted and the country specification, there may be several individual circuit diagrams for a given function.

Potentials



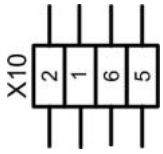
- Main power supply (battery)
- Ignition switch power supply (switched)
- Relay-controlled power supply
- Earth
- Housing earth (external)

Connections

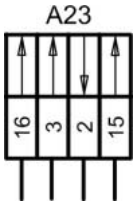


- The description provided **inside** the circle (e.g. “H44”) defines the connection.
- Numbers **next to** the circle (e.g. “1b”) describe the continuation of the cabling in accordance with the circuit diagram numbering which can be taken from the cover sheet or from the footer.

Designations



- Connectors (e.g. „X10”, pin 2– 1– 6– 5).
  Each chapter lists the respective connectors and their pin assignment in the individual connection tables.



- Modules (e.g. “A23”)
  The arrows identify the functional inputs and outputs according to the assignment table provided in chapter **ZE**.

Wiring loom A

- Position of components according to wiring looms

- A 1 .. Z 99 - Component designation according to CLAAS standards catalogue

A - Terminal / Module
B - Sensor
E - Lighting
F - Fuse
G - Voltage Source
H - Signalling Device / Lamp
K - Relay
M - Electric motor
P - Gauge
R - Potentiometer / Resistor
S - Switches – Cab Operation
T - Switches – Terminal Operation
U - Switches – External Operation
V - Electronic Component
W - Antenna
X - Connector
Y - Solenoid Coil
Z - Actual Value Function Switch

Wire colours / Wire cross-sections

Connector	mm²	Colour
XT1 – 1	1.5	bk
XT1 – 2	1.5	br
XT1 – 4	1.5	bk-rd
XT1 – 5	1.5	br-rd
XT2 – 1	1.5	bk
XT2 – 2	1.5	bk-rd
XT2 – 3	1.5	br-rd
XT2 – 15	1.5	br

- Indication of cross-section (mm²) and colour

rd – red
bk – black
br – brown
wt – white
bl – blue
gr – grey
ye – yellow
gn – green
pi – pink
or – orange
vi – violet

- Meaning of wire colours

bk - +30 Power supply from tractor [12V power]
br - -31 Power supply from tractor [0V power]
bk-rd - +15 switched via CCT [12V electronics]
br-rd - -31 via CCT [0V electronic system]
bk-wt - +30 switched via K90 (polarity reversal protection) [12V power]

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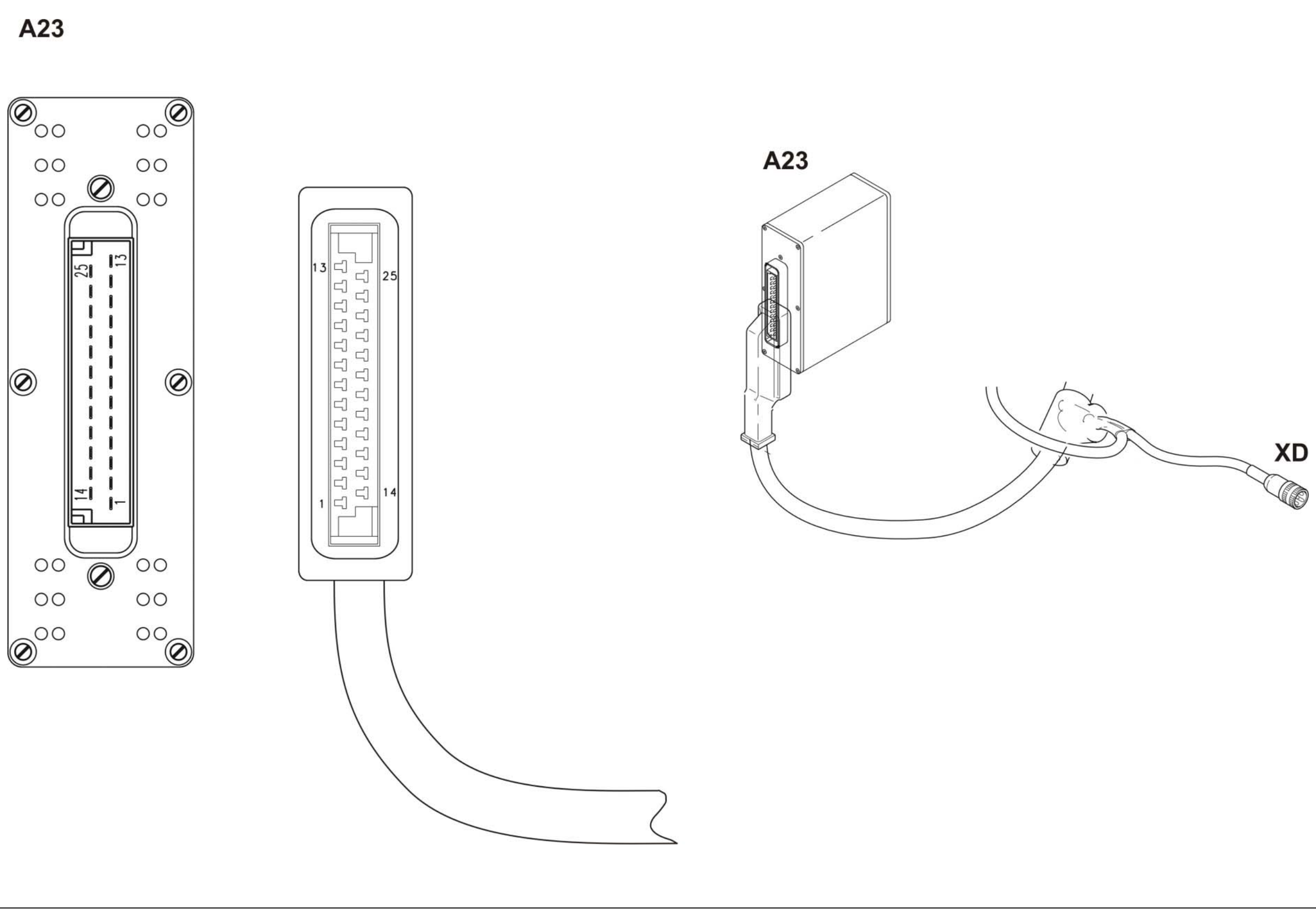
Central terminal compartment

- Rollant 240 Standard
- Rollant 250 Standard

Central terminal compartment Rollant 240/250 Standard



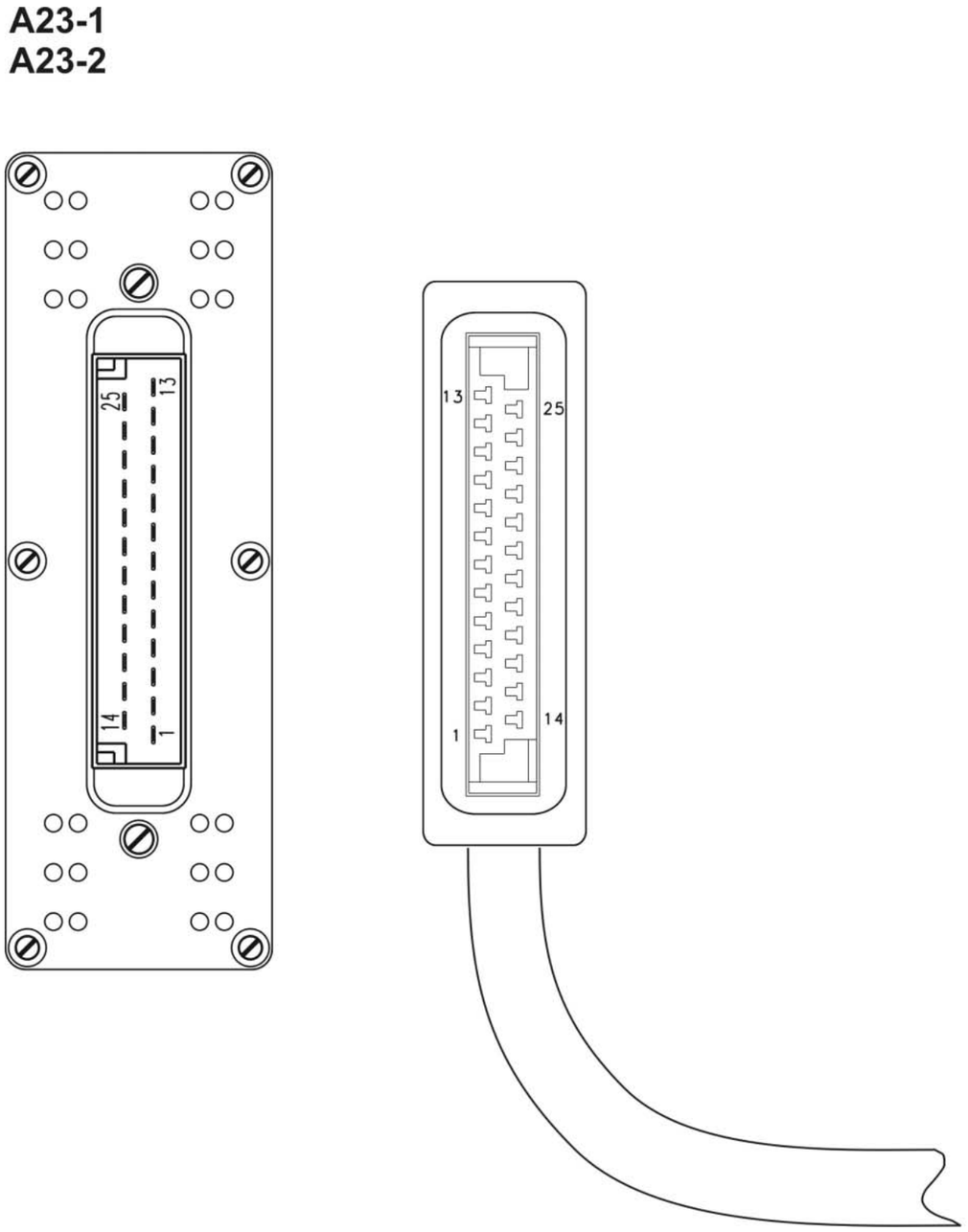
Key to diagram:

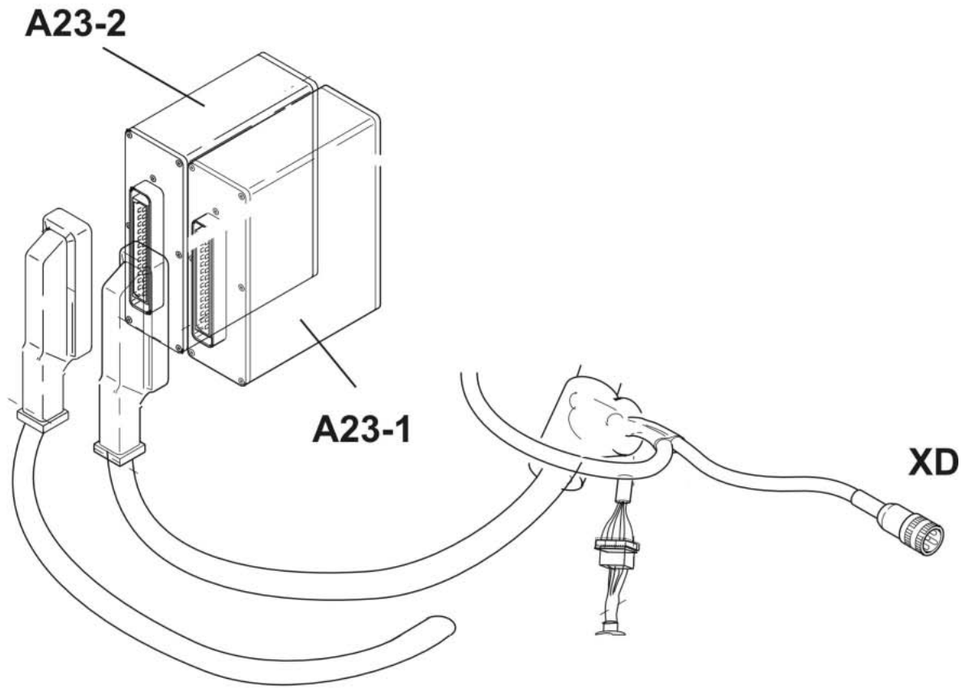
A23	ROLLANT 240/250 Standard module	Wiring loom A – part 2
XD	CAN bus socket (7 pin)	Wiring loom A – part 2

Central terminal compartment

- Rollant 250 Comfort

Central terminal compartment Rollant 250 Comfort





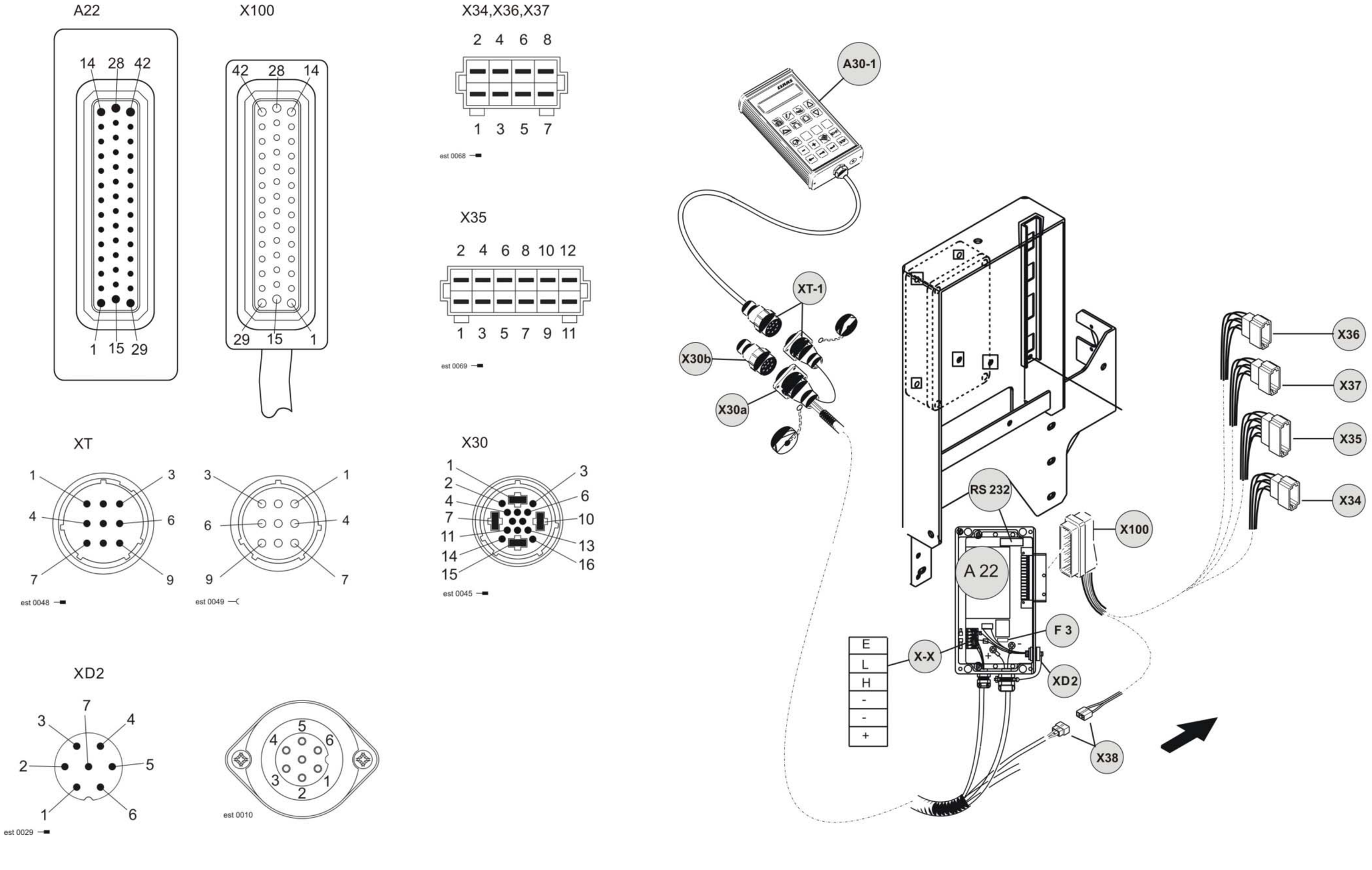
Key to diagram:

A23-1	ROLLANT module 1	Wiring loom B – part 2
A23-2	ROLLANT module 2	Wiring loom B – part 2
XD	CAN bus connector (7 pin) terminal	Wiring loom B – part 2

Central terminal compartment

- UNIWRAP

Central terminal compartment UNIWRAP



Key to diagram:

A22	UNIWRAP bale wrapper module
A30-1	Bale wrapper terminal
F 3	Fuse (15 Amperes)
RS 232	Data link
XD2	CAN bus socket (7 pin)
X-X	Socket
XT-1	Terminal connector
X30a	UNIWRAP link connector
X30b	Blind connector (on Rollant balers **without** UNIWRAP)
X34	Hydraulic system connector
X35	Sensor system connector
X36	Hydraulic system connector
X37	Sensor system connector

Connector	mm²	Colour
X-X E	0.5	rd
X-X L	0.5	bk
X-X H	0.5	gn-ye
X-X -	0.5	vi
X-X -	0.5	br-rd
X-X +	0.5	bk-rd

Pin assignment in modules

Rollant 240

Rollant 250

UNIWRAP

Module A23 Rollant 240/250 Standard

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	ROTOCUT knives ON solenoid coil	Y55	12 V	Output	7a
2	Electronics earth	32	Earth	Input	6a
3	CAN high	-	-	-	6a
4	Not used	-	-	-	-
5	Wrapping release switch (manual)	S77	Earth	Input	11a
6	Not used	-	-	-	-
7	Not used	-	-	-	-
8	Not used	-	-	-	-
9	Not used	-	-	-	-
10	Cam track switch	Z35	12 V	Input	11a
11	Not used	-	-	-	-
12	Twine/net coupling solenoid coil	Y39	12 V	Output	11a
13	Buzzer	H44	12 V	Output	11a
14	ROTOCUT knives OFF	Y54	12 V	Output	7a
15	Electronics plus	15	12 V	Input	6a
16	CAN low	-	-	-	6a
17	No function	-	-	-	-
18	Wrapping delay switch (manual)	S76	Earth	Input	11a
19	Wrapping type selector switch	S74	Earth	Input	11a
20	Power plus (protected against rev. polarity)	K 90 / 87	12 V	Input	7a, 11a
21	Tailgate closed switch	Z16	12 V	Input	11a
22	Bale ejector switch	Z6	12 V	Input	11a
23	Main switch ON / OFF - Rotocut ON / OFF	S75	12 V	Input	7a
24	Not used	-	-	-	-
25	Operating light	H3	12 V	Output	11a

Module A23 –1 Rollant 250 Comfort and Rollant 250 Comfort for Uniwrap

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	Twine coupling	Y38	12 V	Output	11b
2	Electronics earth	32	Earth	Input	6b, 6c
3	CAN high	-	-	-	6b, 6c
4	Amplifier (net cutter motor)	V16	5 V	Output	11b
5	Drive speed sensor	B9	high- low (-)	Input	11b
6	Left twine ball speed sensor	B13	high- low (-)	Input	11b
7	Not used	-	-	-	-
8	Not used	-	-	-	-
9	Tailgate open switch	Z17	12 V	Input	11b
10	Cam track switch	Z35	12 V	Input	11b
11	Not used	-	-	-	-
12	Tailgate open solenoid coil	Y27	12 V	Output	12a
13	Tailgate close solenoid coil	Y28	12 V	Output	12a
14	Net coupling solenoid coil	Y41	12 V	Output	11b
15	Electronics plus	15	12 V	Input	6b, 6c
16	CAN low	-	-	-	6b, 6c
17	Buzzer	H44	5 V	Output	5a, 5b
18	Right twine ball speed sensor	B14	high- low (-)	Input	11b
19	Net roll speed sensor	B22	high- low (-)	Input	11b
20	Power plus (protected ag. rev. polarity)	K 90 / 87	12 V	Input	4a, 4b, 11b, 12a
21	Tailgate closed switch	Z16	12 V	Input	11b
22	Bale ejector switch	Z6	12 V	Input	11b
23	No function	-	-	-	40a, 40b
24	Not used	-	-	-	-
25	Circulation shut-off valve solenoid coil	Y77 / Y77-2	12 V	Output	4a, 4b

Module A23 – 2 Rollant 250 Comfort and Rollant 250 Comfort for Uniwrap

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	Pick-up lower solenoid coil	Y49	12 V	Output	20a
2	Electronics earth	32	Earth	Input	6b, 6c
3	CAN high	-	-	-	6b, 6c
4	No function	-	-	-	40a, 40b
5	No function	-	-	-	40a, 40b
6	Not used	-	-	-	-
7	Not used	-	-	-	-
8	Not used	-	-	-	-
9	No function	-	-	-	40a, 40b
10	No function	-	-	-	40a, 40b
11	Electronics plus	15	12 V	Input	6b, 6c
12	Rotor reverse solenoid coil (extend cylinder)	Y56	12 V	Output	7b
13	Rotor reverse solenoid coil (retract cylinder)	Y57	12 V	Output	7b
14	Pick-up raise solenoid coil	Y48	12 V	Output	20a
15	Electronics plus	15	12 V	Input	6b, 6c
16	CAN low	-	-	-	6b, 6c
17	No function	-	-	-	40a, 40b
18	Not used	-	-	-	-
19	Not used	-	-	-	-
20	Power plus (protected ag. rev. polarity)	K 90 / 87	12 V	Input	7b, 20a
21	Reverser switch	Z48	12 V	Input	7b
22	No function	-	-	-	40a, 40b
23	Not used	-	-	-	-
24	Not used	-	-	-	-
25	Relay K93 (ROTOCUT knives ON/OFF)	K93	12 V	Output	7b

Module A22 – Uniwrap bale wrapper (Pin assignment on connector X100)

Pin	Function	Component	Measuring variable	Direction	Circuit diagram no.
1	Not used	-	-	-	-
2	Rotate wrapping arm forward solenoid coil	Y133	12 V PWM	Output	21a
3	Not used	-	-	-	-
4	Wrapping arm basic position sensor	B106	high- low (-)	Input	21a
5	Film break monitoring receiver	V12	high- low (-)	Input	22a
6	Not used	-	-	-	-
7	Not used	-	-	-	-
8	Rollant circulation shut-off valve solenoid coil	Y77-1	12 V	Output	4c
9	Rotate wrapping arm backward solenoid coil	Y134	12 V	Output	21a
10	Lower tipping cradle solenoid coil	Y135	12 V	Output	19a
11	No function	-	-	-	40c
12	Raise tipping cradle solenoid coil	Y136	12 V	Output	19a
13	Close film cutters solenoid coil	Y140	12 V	Output	22a
14	Raise wrapping table	Y138	12 V	Output	19a
15	Not used	-	-	-	-
16	Not used	-	-	-	-
17	Not used	-	-	-	-
18	Not used	-	-	-	-
19	Not used	-	-	-	-
20	Not used	-	-	-	-
21	Bale on wrapping table switch	Z92	Earth	Input	19a
22	Safety bracket switch	Z91/91-2	Earth	Input	21a
23	Wrapping arm rotations sensor	B107	high- low (-)	Input	21a
24	Not used	-	-	-	-
25	Not used	-	-	-	-
26	Not used	-	-	-	-
27	Not used	-	-	-	-
28	Lower wrapping table solenoid coil	Y137	12 V	Output	19a, 21a, 22a
29	0 Volt power (earth)	A22	0 V	Output	19a, 21a, 22a
30	Not used	-	-	-	-
31	12 V (sensor power supply)	A22	12 V	Output	19a
32	Not used	-	-	-	-
33	Not used	-	-	-	-
34	Wrapping table at top switch	B105	high- low (-)	Input	19a
35	Not used	-	-	-	-
36	Bale in tipping cradle sensor	B102	high- low (-)	Input	19a
37	Tipping cradle at bottom sensor	B103	high- low (-)	Input	19a
38	0 V (sensor power supply)	A22	0 V	Output	19a, 21a, 22a
39	Not used	-	-	-	-
40	Not used	-	-	-	-
41	Open film cutters	Y139	12 V	Output	22a
42	Not used	-	-	-	-

Circuit diagram allocation of fuses and relays

25 A	On tractor side (not shown) / protects + 30

K90	1a, 1b, 1c
K93	7b
V16	11b

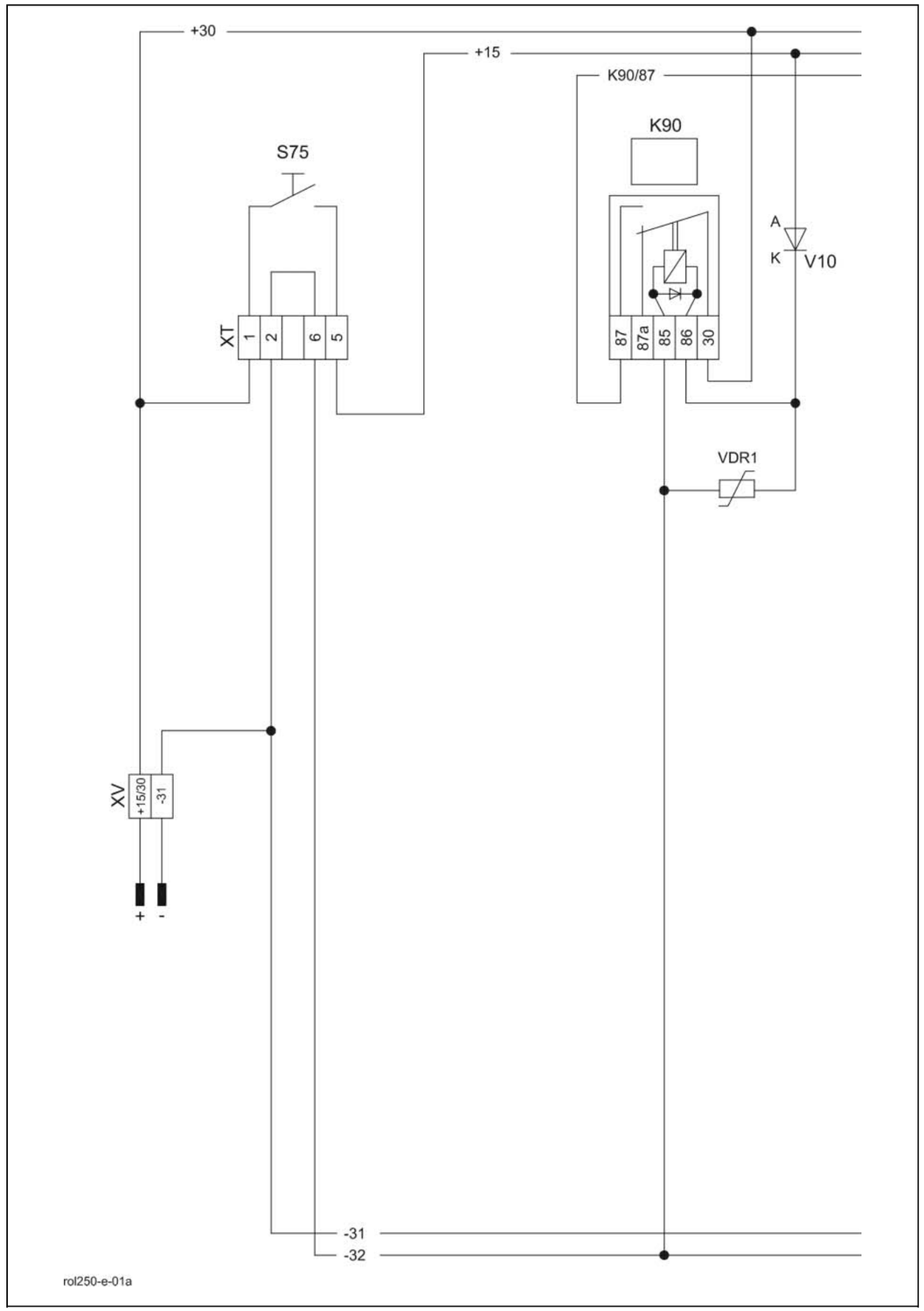
1a

Main power supply

Rollant 240 Standard

Rollant 250 Standard

01a - Main power supply Rollant 240/250 Standard



Key to diagram:

K90	Power supply relay (protected against reverse polarity)	Wiring loom A-part 2
S75	Main switch	Wiring loom A-part 1
V10	Reverse polarity protection Diode	Wiring loom A-part 2
VDR1	Varistor	Wiring loom A-part 2
XT	Terminal connector	Wiring loom A-part 1
XV	Power supply connector	Wiring loom A-part 1

Measured value table:

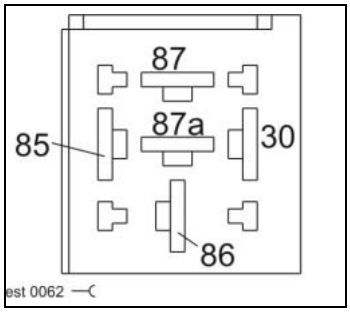
Item	Component	Measured value	Note
K90	Remote control relay 20 A 30 A	75±10 Ω	(Pin 86/1 – 85/2) (Pin 87a/4 – 30/3) (Pin 87/5 – 30/3)

Description of function:

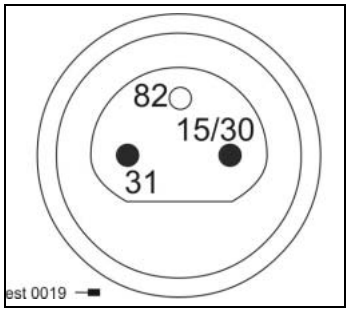
Main power supply	Power supply from the tractor to the baler is via connector XV. On the tractor, this prower supply should be protected by a fuse of 25 A max.
Potential + 15	This is switched by the main switch T 12 on the control box (electronics +).
Potential K 90 / 87	Potential K 90/ 87 is a power plus protected against reverse polarity by diode V10.
Overvoltage protection	VDR1 becomes conducting when overvoltage occurs. This smooths the voltage peaks in the electronics circuit (+15 / -32).

Connector pin definition

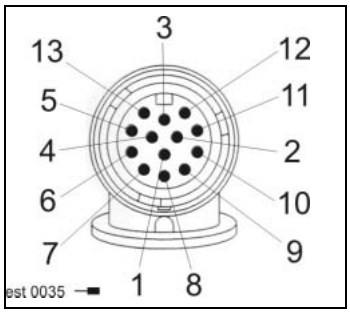
Socket K90



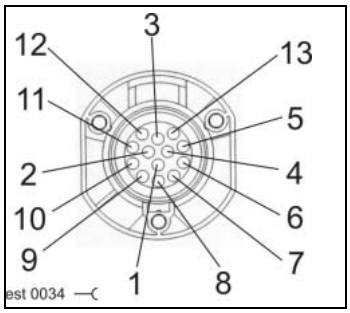
Connector XV



Connector XT



Socket XT



Connector	mm²	Colour
K90/30	2.5	bk
K90/85	1.0	br-rd
K90/86	0.75	bk-rd
K90/87	2.5	bk-wt
XT1 – 1	1.5	bk
XT1 – 2	1.5	br
XT1 – 5	1.5	bk-rd
XT1 – 6	1.5	br-rd
XT2 – 1	1.5	bk
XT2 – 2	1.5	br
XT2 – 5	1.5	bk-rd
XT2 – 6	1.5	br-rd

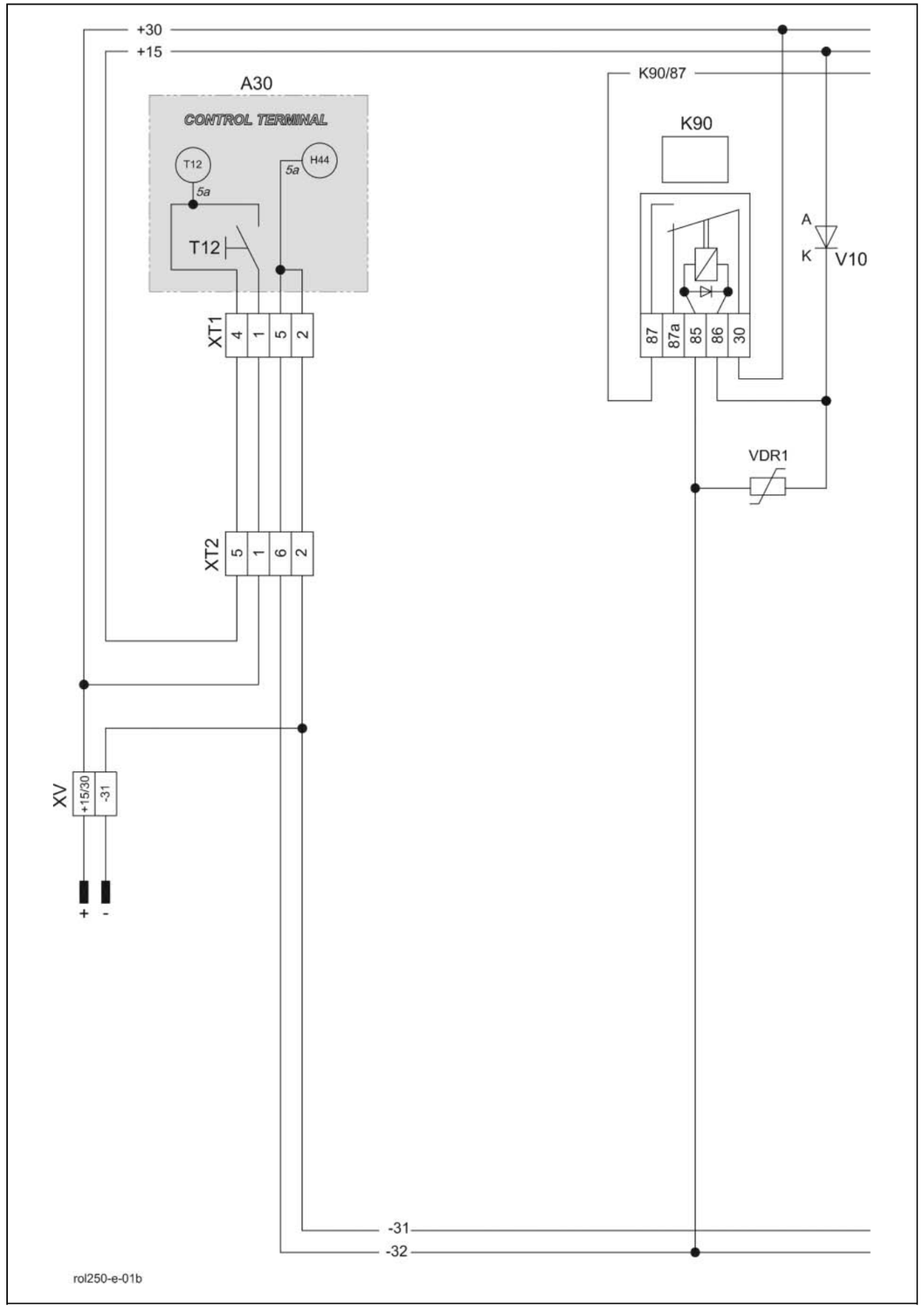
Connector	mm²	Colour
XV - 15/30	2.5	bk
XV - 31	2.5	br

1b

Main power supply

Rollant 250 Comfort

01b - Main power supply Rollant 250 Comfort



Key to diagram:

A30	CCT terminal	Wiring loom B-part 1
H44	Buzzer	Wiring loom B-part 1
K90	Power supply relay (protected against reverse polarity)	Wiring loom B-part 2
T12	Main switch	Wiring loom B-part 1
V10	Reverse polarity protection diode	Wiring loom B-part 2
VDR1	Varistor	Wiring loom B-part 2
XT1	Terminal connector	Wiring loom B-part 1
XT2	Terminal connector	Wiring loom B-part 1
XV	Power supply connector	Wiring loom B-part 1

Measured value table:

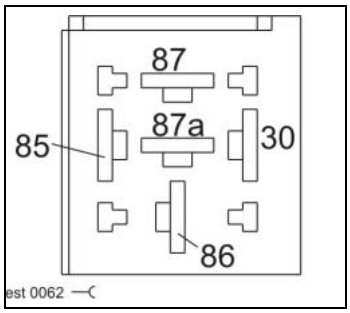
Item	Component	Measured value	Note
K90	Remote control relay 20 A 30 A	75±10 Ω	(Pin 86/1 – 85/2) (Pin 87a/4 – 30/3) (Pin 87/5 – 30/3)

Description of function:

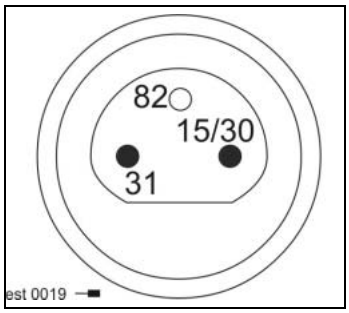
Main power supply	Power supply from the tractor to the baler is via connector XV. On the tractor, this prower supply should be protected by a fuse of 25 A max.
Potential + 15	This is switched by the main switch T 12 on terminal A30 (electronics +).
Potential K 90 / 87	Potential K 90/ 87 is a power plus protected against reverse polarity by diode V10.
Overvoltage protection	VDR1 becomes conducting when overvoltage occurs. This smooths the voltage peaks in the electronics circuit (+15 / -32).

Connector pin definition

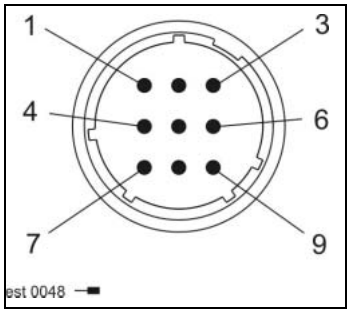
Socket K90



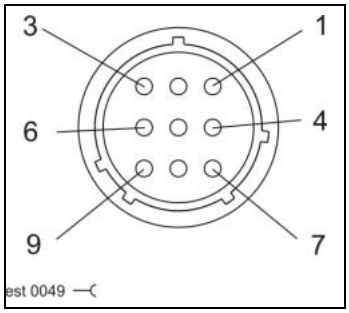
Connector XV



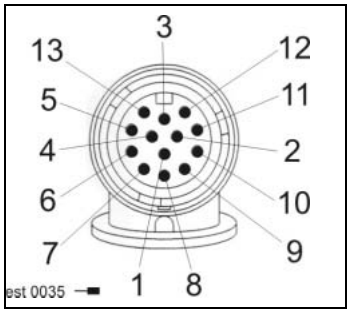
Connector XT1



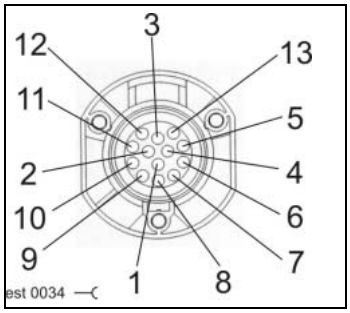
Socket XT1



Connector XT2



Socket XT2



Connector	mm²	Colour
K90/30	2.5	bk
K90/85	1.0	br-rd
K90/86	0.75	bk-rd
K90/87	2.5	bk-wt
XT1 – 1	1.5	bk
XT1 – 2	1.5	br
XT1 – 4	1.5	bk-rd
XT1 – 5	1.5	br-rd
XT2 – 1	1.5	bk
XT2 – 2	1.5	br
XT2 – 5	1.5	bk-rd
XT2 – 6	1.5	br-rd

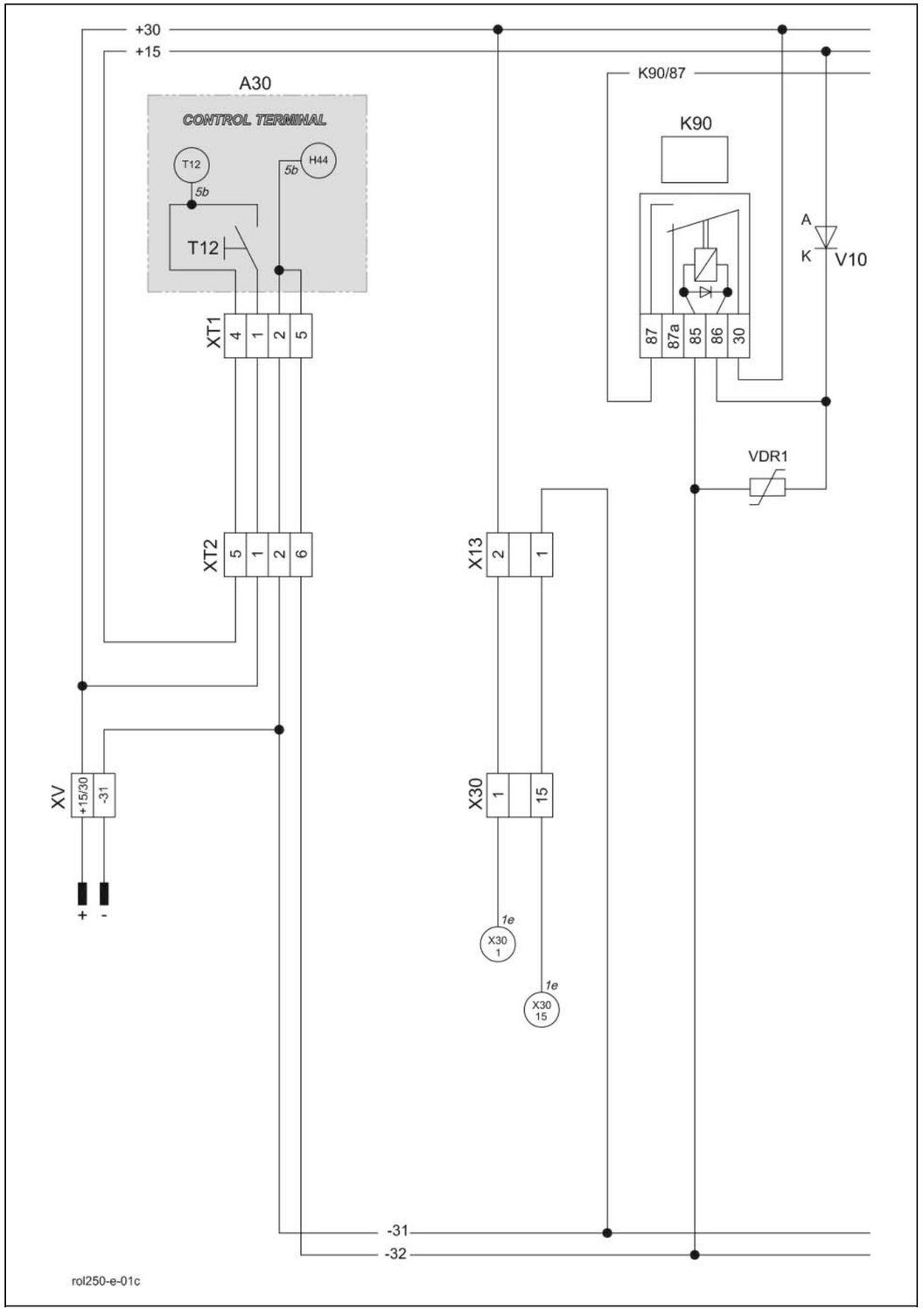
Connector	mm²	Colour
XV - 15/30	2.5	bk
XV - 31	2.5	br

1c

Main power supply

Rollant 250 Comfort for UNIWRAP

01c - Main power supply Rollant 250 Comfort for UNIWRAP



Key to diagram:

A30	CCT terminal	Wiring loom B-part 1
H44	Buzzer	Wiring loom B-part 1
K90	Power supply relay (protected against reverse polarity)	Wiring loom B-part 2
T12	Main switch	Wiring loom B-part 1
V10	Reverse polarity protection diode	Wiring loom B-part 2
VDR1	Varistor	Wiring loom B-part 2
X13	Connector	Wiring loom B-part 2
		Wiring loom D
X30	Connector	Wiring loom D
		Wiring loom K
XT1	Terminal connector	Wiring loom B-part 1
XT2	Terminal connector	Wiring loom B-part 1
XV	Power supply connector	Wiring loom B-part 1

Measured value table:

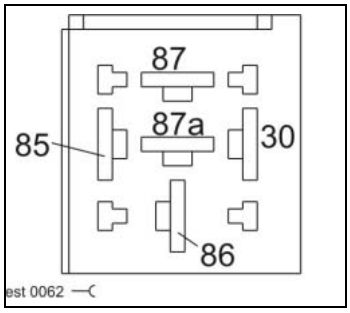
Item	Component	Measured value	Note
K90	Remote control relay 20 A 30 A	75±10 Ω	(Pin 86/1 – 85/2) (Pin 87a/4 – 30/3) (Pin 87/5 – 30/3)

Description of function:

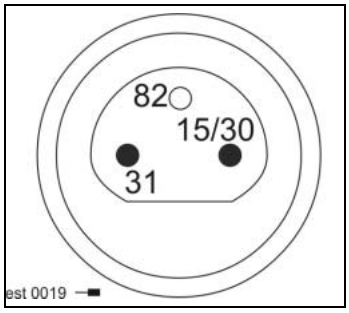
Main power supply	Power supply from the tractor to the baler is via connector XV. On the tractor, this prower supply should be protected by a fuse of 25 A max.
Potential + 15	This is switched by the main switch T 12 on terminal A30 (electronics +).
Potential K 90 / 87	Potential K 90/ 87 is a power plus protected against reverse polarity by diode V10.
Overvoltage protection	VDR1 becomes conducting when overvoltage occurs. This smooths the voltage peaks in the electronics circuit (+15 / -32).

Connector pin definition

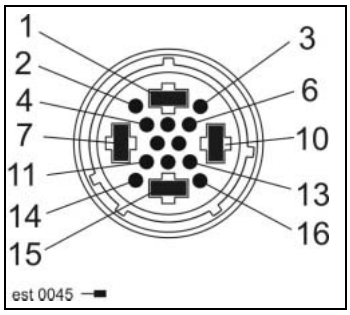
Socket K90



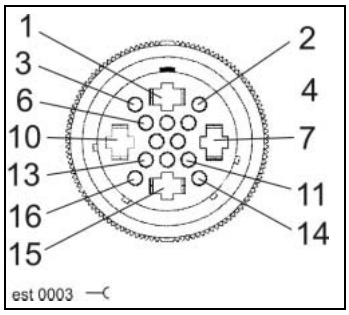
Connector XV



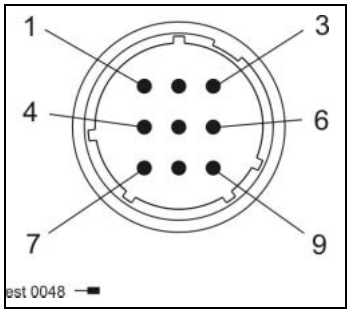
Connector X30



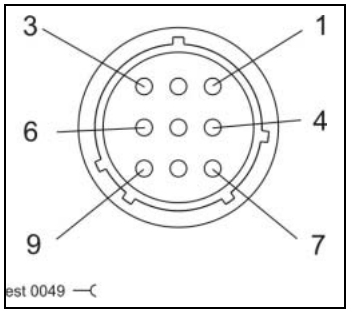
Socket X30



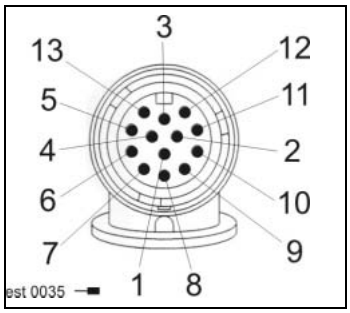
Connector XT1



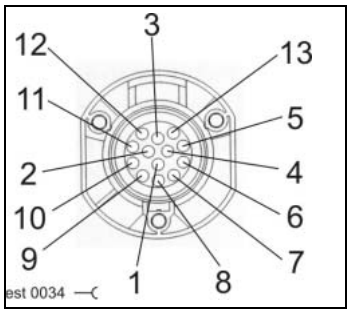
Socket XT1



Connector XT2



Socket XT2



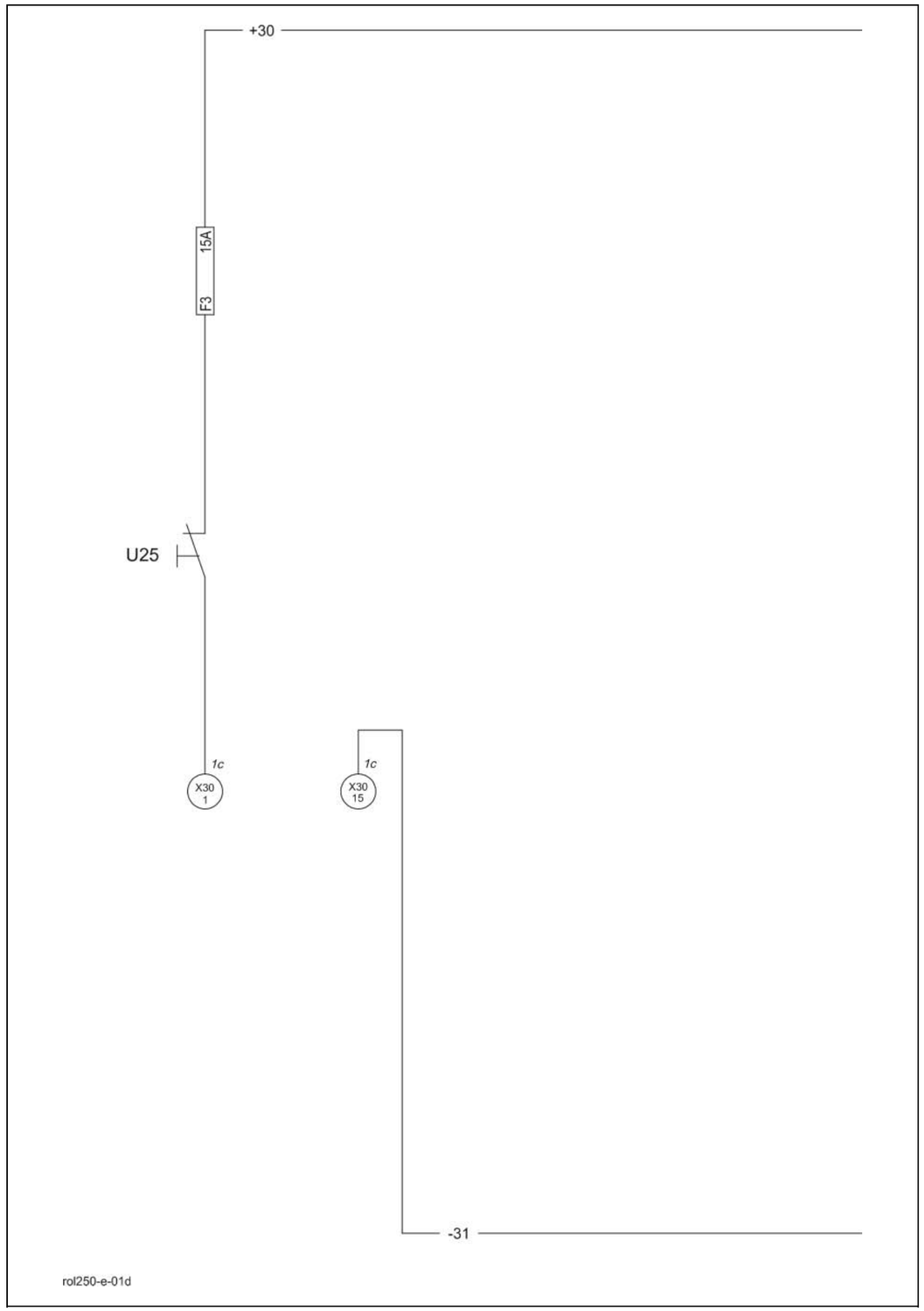
Connector	mm²	Colour
K90/30	2.5	bk
K90/85	1.0	br-rd
K90/86	0.75	bk-rd
K90/87	2.5	bk-wt
X13 - 2	2.5	bk
X13 - 1	2.5	br
X30 - 1	2.5	bk
X30 - 15	2.5	br
XT1 - 1	1.5	bk
XT1 - 2	1.5	br
XT1 - 4	1.5	bk-rd
XT1 - 5	1.5	br-rd
XT2 - 1	1.5	bk
XT2 - 2	1.5	br
XT2 - 5	1.5	bk-rd
XT2 - 6	1.5	br-rd
XV - 15/30	2.5	bk
XV - 31	2.5	br

1d

Main power supply

UNIWRAP

01d - Main power supply UNIWRAP



Key to diagram:

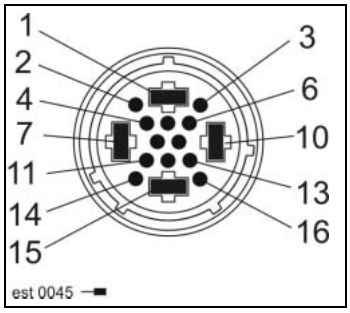
U25	EMERGENCY OFF switch	Wiring loom K
X30	Connector	Wiring loom D / G / K

Description of function:

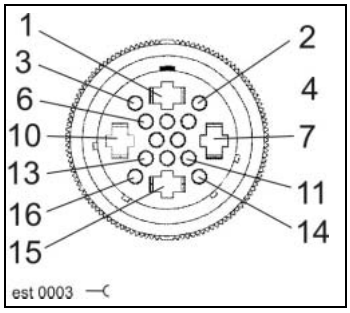
Main power supply	Power supply from the tractor to the bale wrapper is via connector X30. On the tractor, this prower supply should be protected by a fuse of 25 A max.
Potential + 30 (power plus)	Power supply plus is switched on by EMERGENCY OFF switch U25 on the bale wrapper and protected by fuse F3.

Connector pin definition

Connector X30



Socket X30



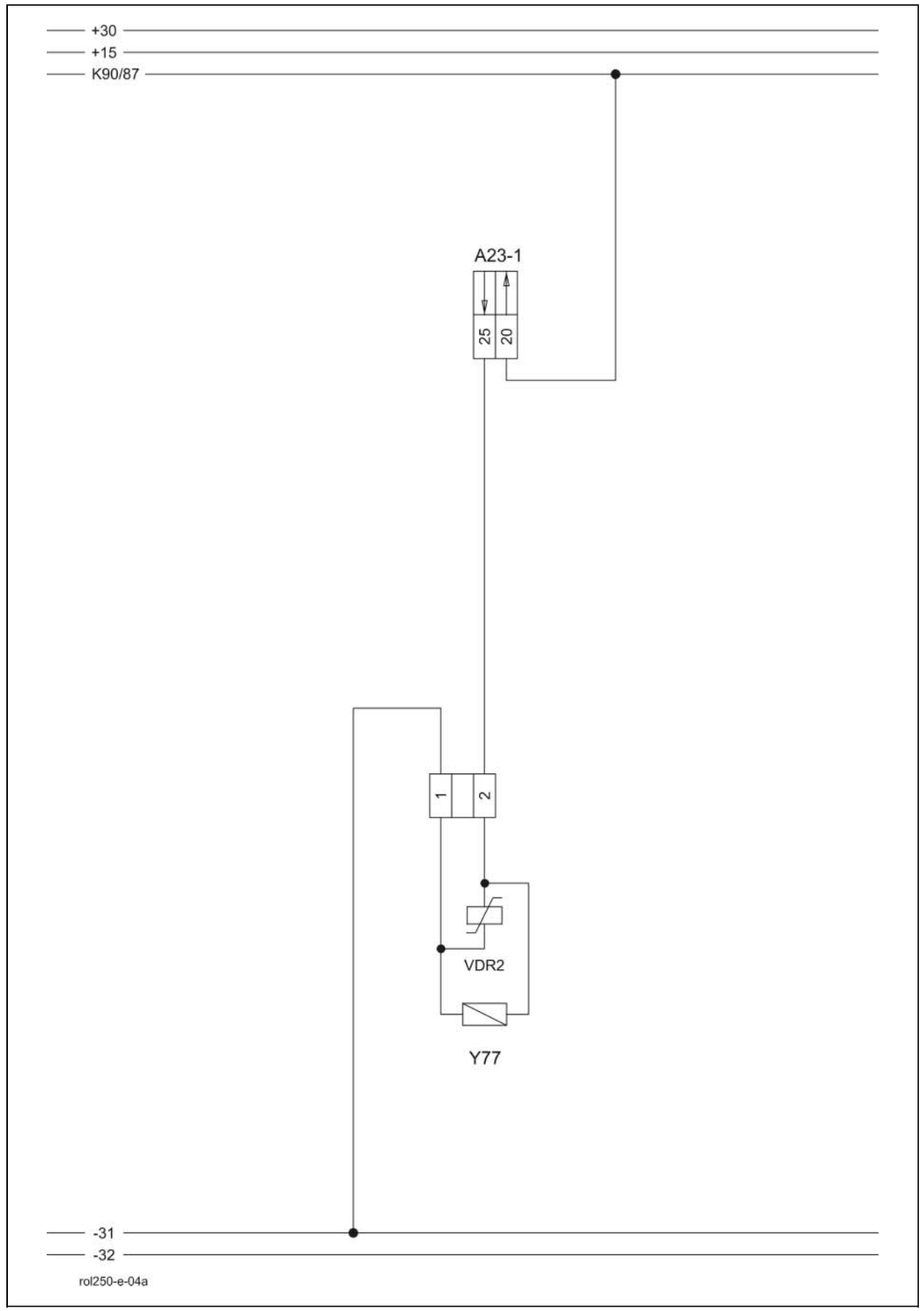
Connector	mm²	Colour
X30 - 1	2.5	bl
X30 - 15	2.5	bl

4a

Circulation shut-off valve

Rollant 250 Comfort

04a - Circulation shut-off valve (with central terminal compartment) Rollant 250 Comfort



Key to diagram:

A23-1	ROLLANT 250 module	Wiring loom B - part 2
VDR2	Varistor	not shown
Y77	Circulation shut-off valve solenoid coil	Wiring loom B - part 2

Measured value table:

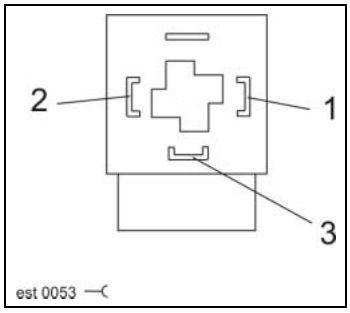
Item	Component	Measured value	Note
Y77	Soleoind coil	3.8 A; 3.2 Ω	

Description of function:

Circulation shut-off valve	To be able to build up the working pressure necessary for many hydraulic control systems, the neutral hydraulic circulation must be blocked (see chapter "Hydraulic system"). In this case, the solenoid coil (Y77) is actuated by module A 23 –1 in parallel to the function.

Connector pin definition

Socket Y77



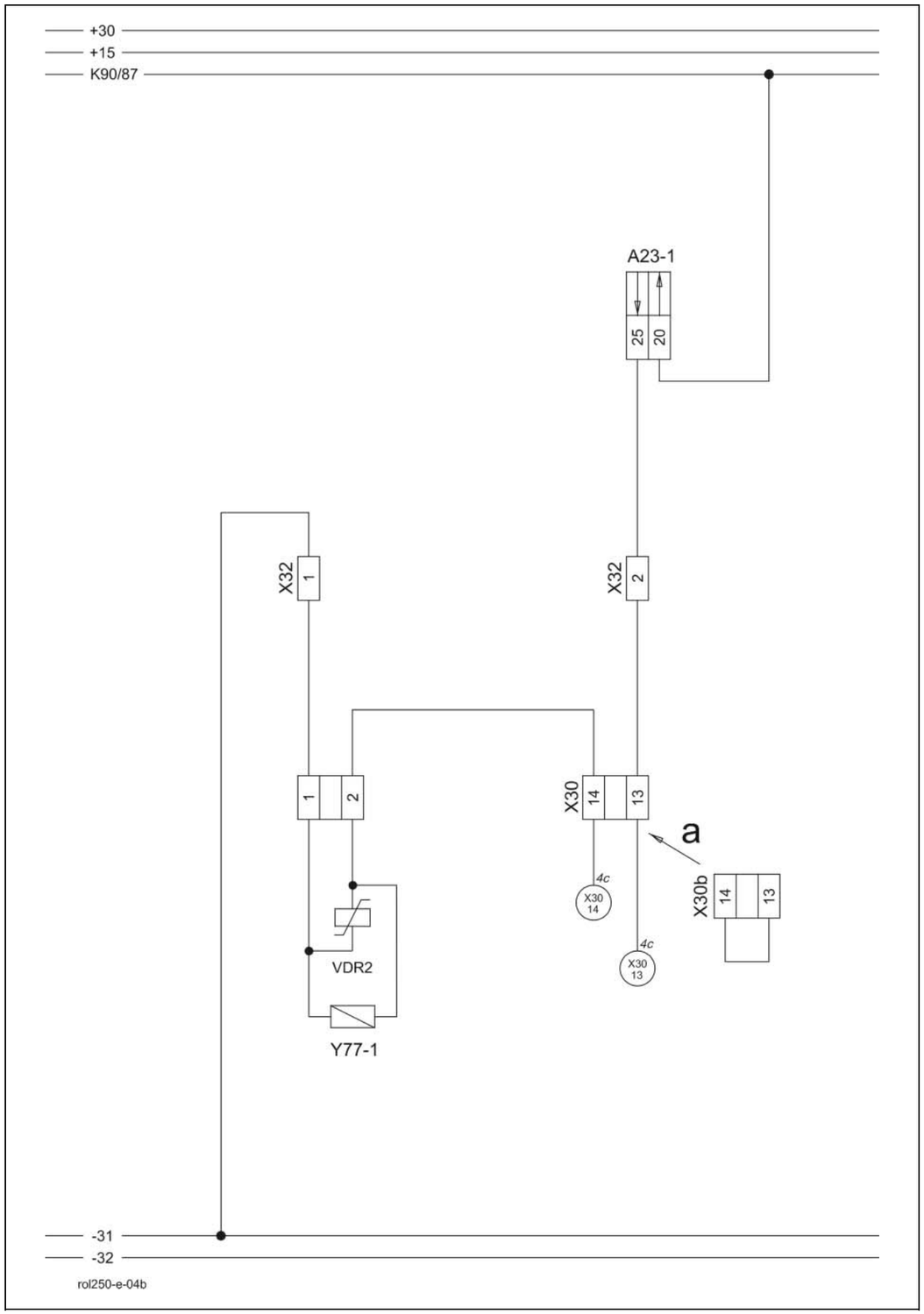
Connector	mm²	Colour
Y77 - 1	0.75	br
Y77 - 2	0.75	gn

4b

Circulation shut-off valve

Rollant 250 Comfort for UNIWRAP

04b - Circulation shut-off valve Rollant 250 Comfort for UNIWRAP



Key to diagram:

A23-1	ROLLANT 250 module	Wiring loom B – part 2
VDR2	Varistor	not shown
X30	Connector	Wiring loom D
		Wiring loom K
X32	Connector	Wiring loom D
Y77-1	Circulation shut-off valve solenoid coil (Rollant 250)	Wiring loom D

Measured value table:

Item	Component	Measured value	Note
Y77	Solenoid coil	3.8 A; 3.2 Ω	

Note:

a - Blind connector X30-b only when using the baler **without** UNIWRAP

Description of function:

Circulation shut-off valve
Use **with** UNIWRAP bale wrapper

To be able to build up the working pressure necessary for many hydraulic control systems, the neutral hydraulic circulation must be blocked (see chapter "Hydraulic system").
In this case, the circulation shut-off valve solenoid coil Y77-2 (UNIWRAP) on the bale wrapper is actuated by module A 23-1 in parallel to the respective function.

When used with the bale wrapper, the bale wrapper module A 22 **permanently** actuates the circulation shut-off valve solenoid coil Y77-1 (Rollant 250). The circulation shut-off valve solenoid coil Y77-1 is additionally blocked by mechanical means (see Operator's Manual).

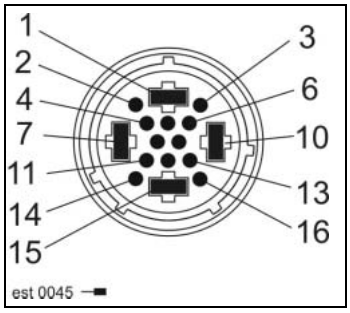
Circulation shut-off valve
Use **without** UNIWRAP bale wrapper

To be able to build up the working pressure necessary for many hydraulic control systems, the neutral hydraulic circulation must be blocked (see chapter "Hydraulic system").
In this case, the circulation shut-off valve solenoid coil Y77-1 (ROLLANT 250) is actuated by module A 23-1 in parallel to the respective function.

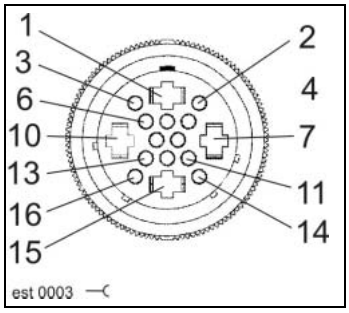
When used without the bale wrapper, a blind plug is mounted on X30. This provides the connection between module A 23-1 and the circulation shut-off valve solenoid coil Y77-1 (see note a). For further modification measures refer to the respective chapter in the Operator's Manual.

Connector pin definition

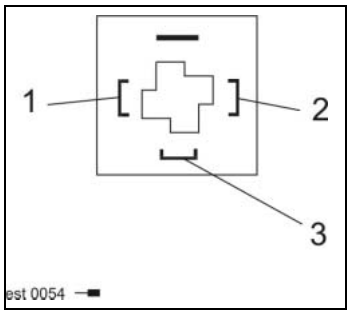
Connector X30



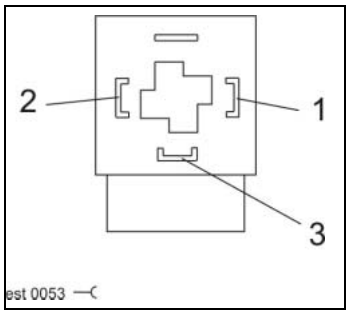
Socket X30



Connector X32



Socket X32 / Y77-1



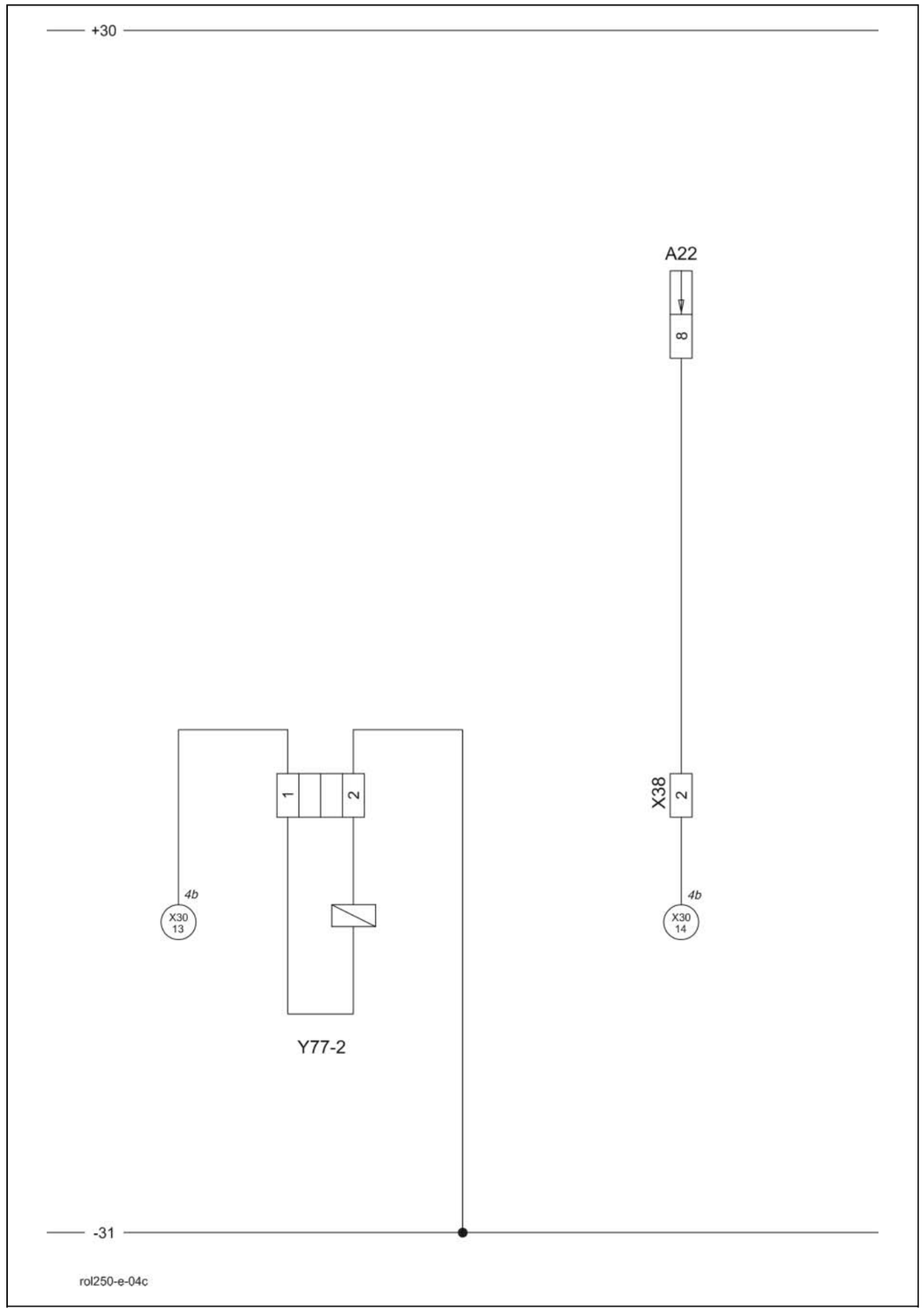
Connector	mm²	Colour
X30 – 13	1.0	bk-ye
X30 – 14	1.0	bk-gn
X32 – 1	1.0	br
X32 – 2	1.0	bk-ye
Y77 – 1 – 1	1.0	br
Y77 – 1 – 2	1.0	bk-gn

4c

Circulation shut-off valve

UNIWRAP

04c - Circulation shut-off valve UNIWRAP



Key to diagram:

A22	Bale wrapper module	ZE
X30	Connector	Wiring loom D / K
X38	ZE separating point	ZE
Y77-2	Circulation shut-off valve (bale wrapper)	Wiring loom K

Measured value table:

Item	Component	Measured value	Note
Y77-2	Solenoid coil	1.9 A; 6.4 Ω	

Description of function:

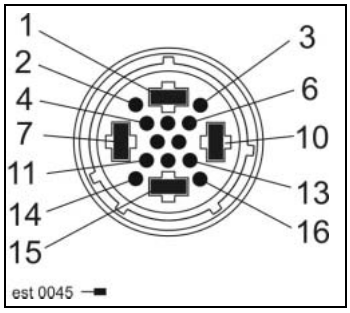
Circulation shut-off valve
Use **with**
UNIWRAP bale wrapper

To be able to build up the working pressure necessary for many hydraulic control systems, the neutral hydraulic circulation must be blocked (see chapter "Hydraulic system").
In this case, the circulation shut-off valve solenoid coil Y77-2 (UNIWRAP) on the bale wrapper is actuated by module A 23 – 1 (Rollant 250) via plug X30 in parallel to the respective function.

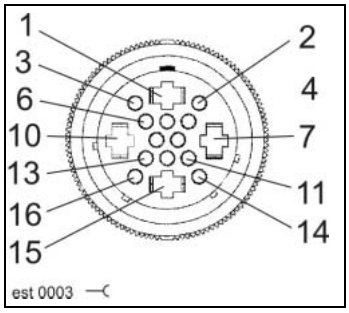
When used with the bale wrapper, the bale wrapper module A 22 **permanently** actuates the circulation shut-off valve solenoid coil Y77-1 (Rollant 250) via plug X30.
The circulation shut-off valve solenoid coil Y77-1 is additionally blocked by mechanical means (see Operator's Manual).

Connector pin definition

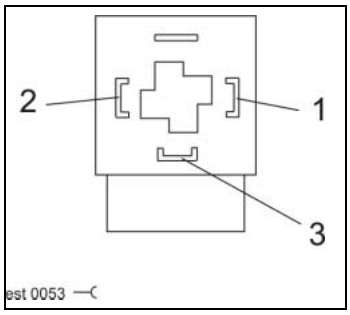
Connector X30



Socket X30



Socket Y77-2



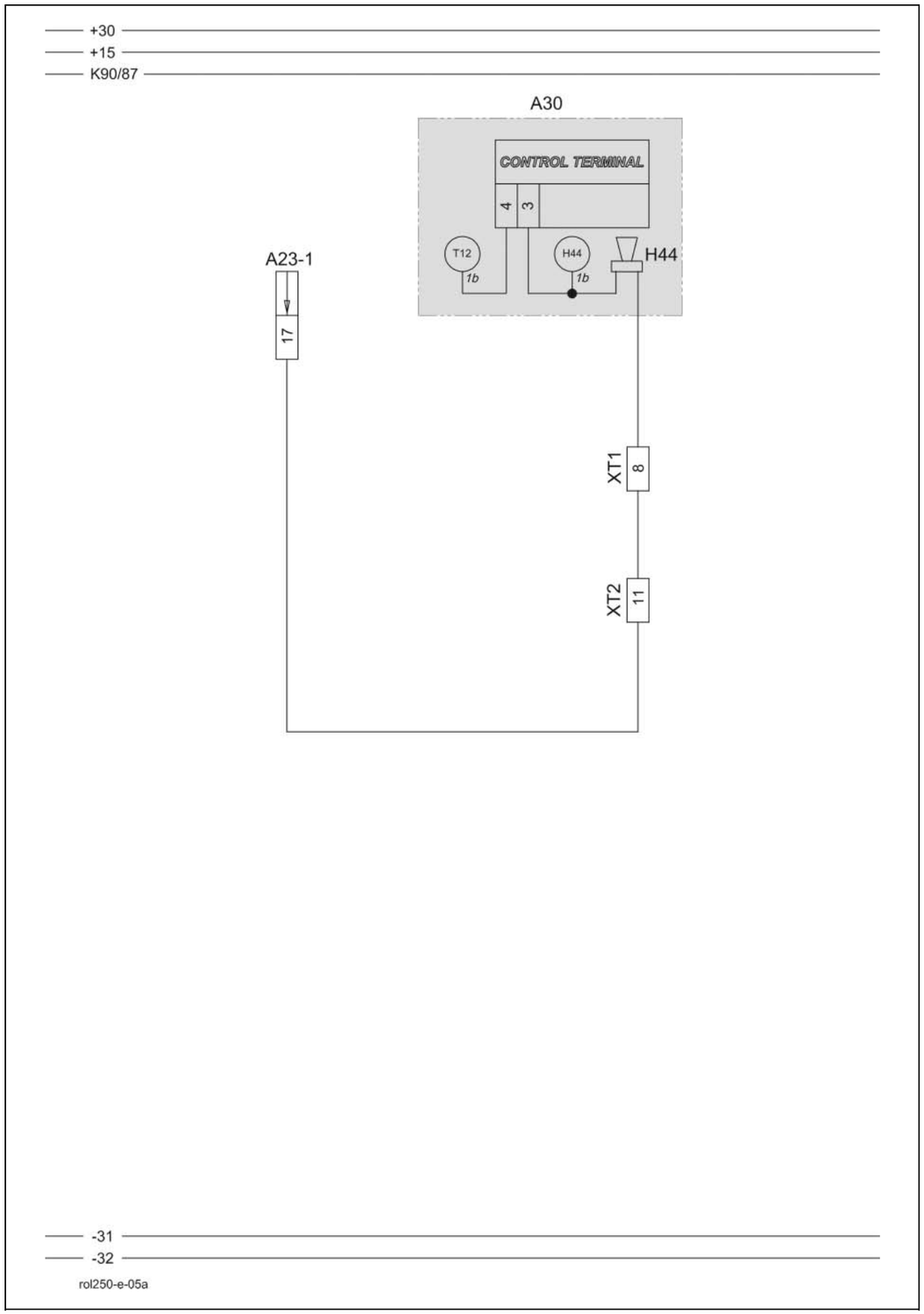
Connector	mm²	Colour
X30 - 13	2.5	br
X30 - 14	2.5	br
X38 - 2	0.75	gr-wt
Y77-2 - 1	2.5	br
Y77-2 - 2	2.5	bl

5a

Terminal

Rollant 250 Comfort

05a - Terminal Rollant 250 Comfort



Key to diagram:

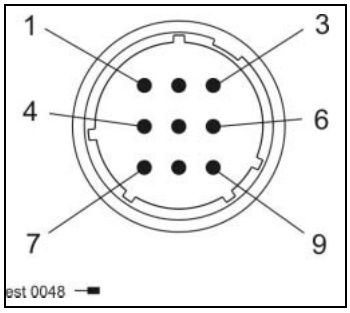
A23-1	ROLLANT 250 module	Wiring loom B – part 2
A30	CCT terminal	Wiring loom B – part 1
H44	Buzzer	Wiring loom B – part 1
T12	Main switch	Wiring loom B – part 1
XT1	Terminal connector	Wiring loom B – part 1
XT2	Terminal connector	Wiring loom B – part 1

Description of function:

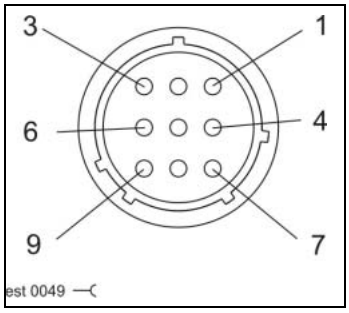
Terminal	Buzzer H 44 is actuated by module A 23-1 to inform the driver about operating conditions / alarms (see also respective chapters in Operator's Manual).

Connector pin definition

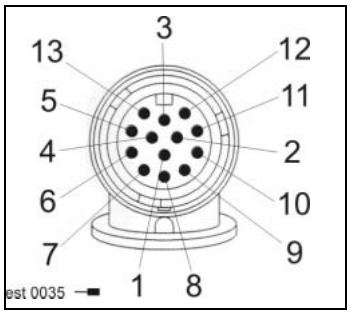
Connector XT1



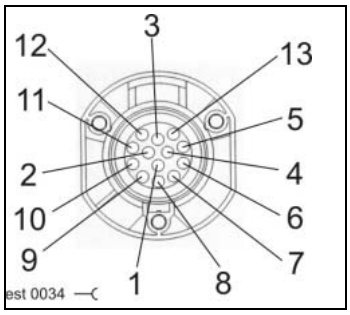
Socket XT1



Connector XT2



Socket XT2



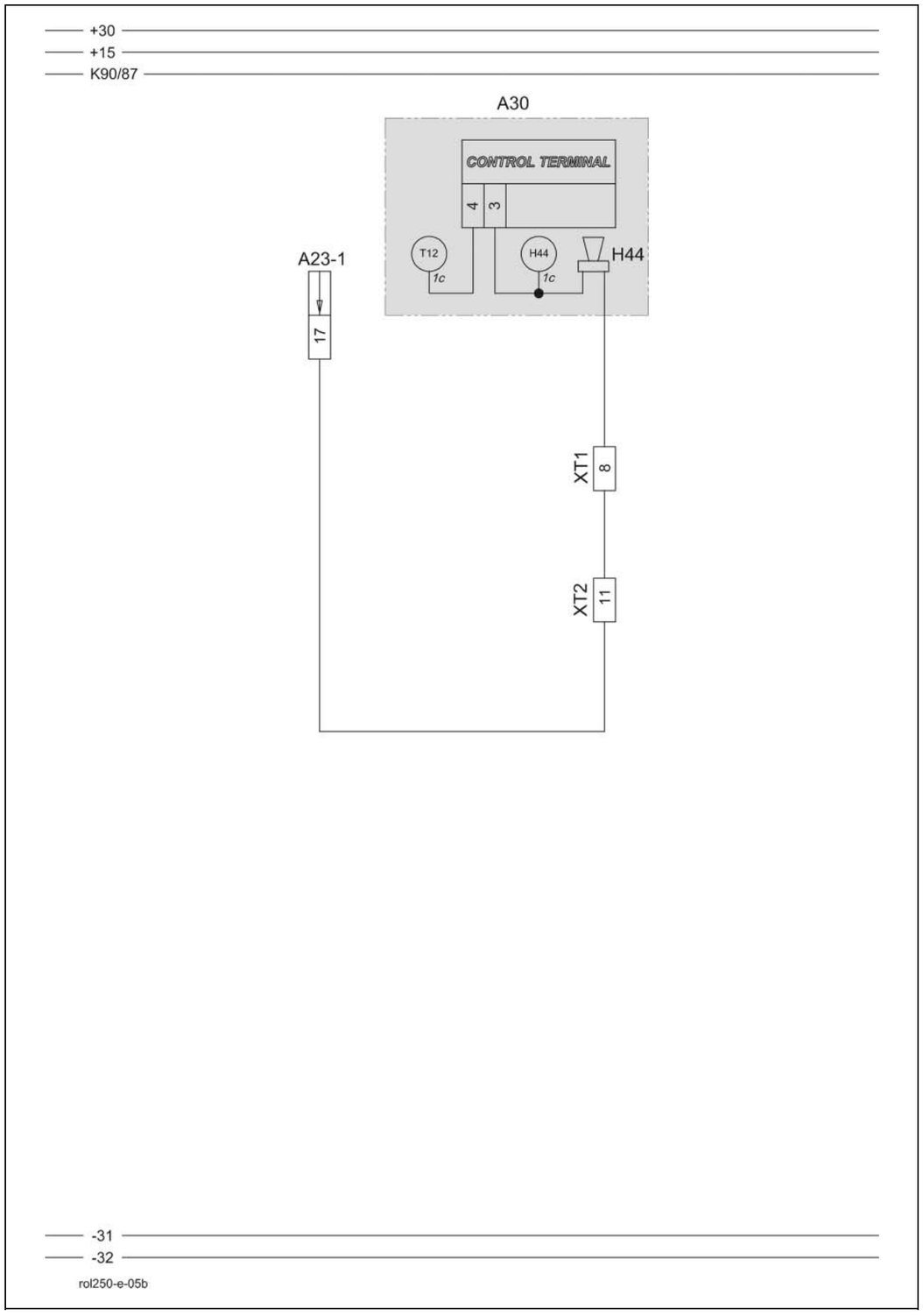
Connector	mm²	Colour
XT1 – 8	0.75	bk-ye
XT2 – 11	0.75	bk-ye

5b

Terminal

Rollant 250 Comfort for UNIWRAP

05b - Terminal UNIWRAP up to machine no. 726 00 130



Key to diagram:

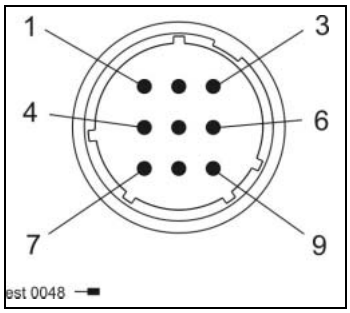
A23-1	ROLLANT 250 module	Wiring loom B - part 2
A30	CCT terminal	Wiring loom B - part 1
H44	Buzzer	Wiring loom B - part 1
T12	Main switch	Wiring loom B - part 1
X30	Connector	Wiring loom D / K
X31	Connector	Wiring loom D
XT1	Terminal connector	Wiring loom B - part 1
XT2	Terminal connector	Wiring loom B - part 1

Description of function:

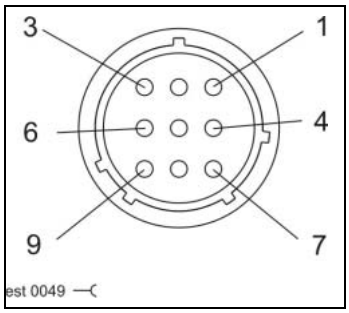
Terminal	Buzzer H 44 is actuated by module A 23-1 to inform the driver about operating conditions / alarms (see also respective chapters in Operator's Manual).

Connector pin definition

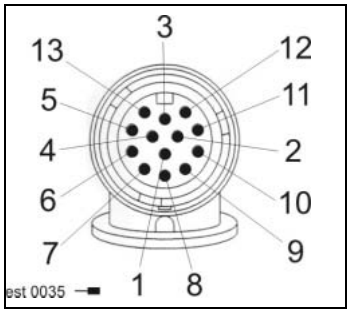
Connector XT1



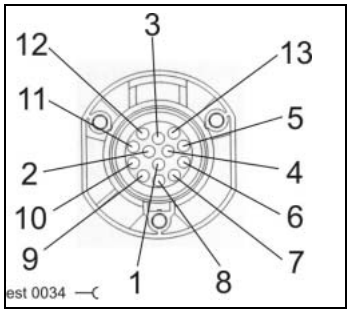
Socket XT1



Connector XT2



Socket XT2



Connector	mm²	Colour
XT1 – 8	0.75	bk-ye
XT2 – 11	0.75	bk-ye

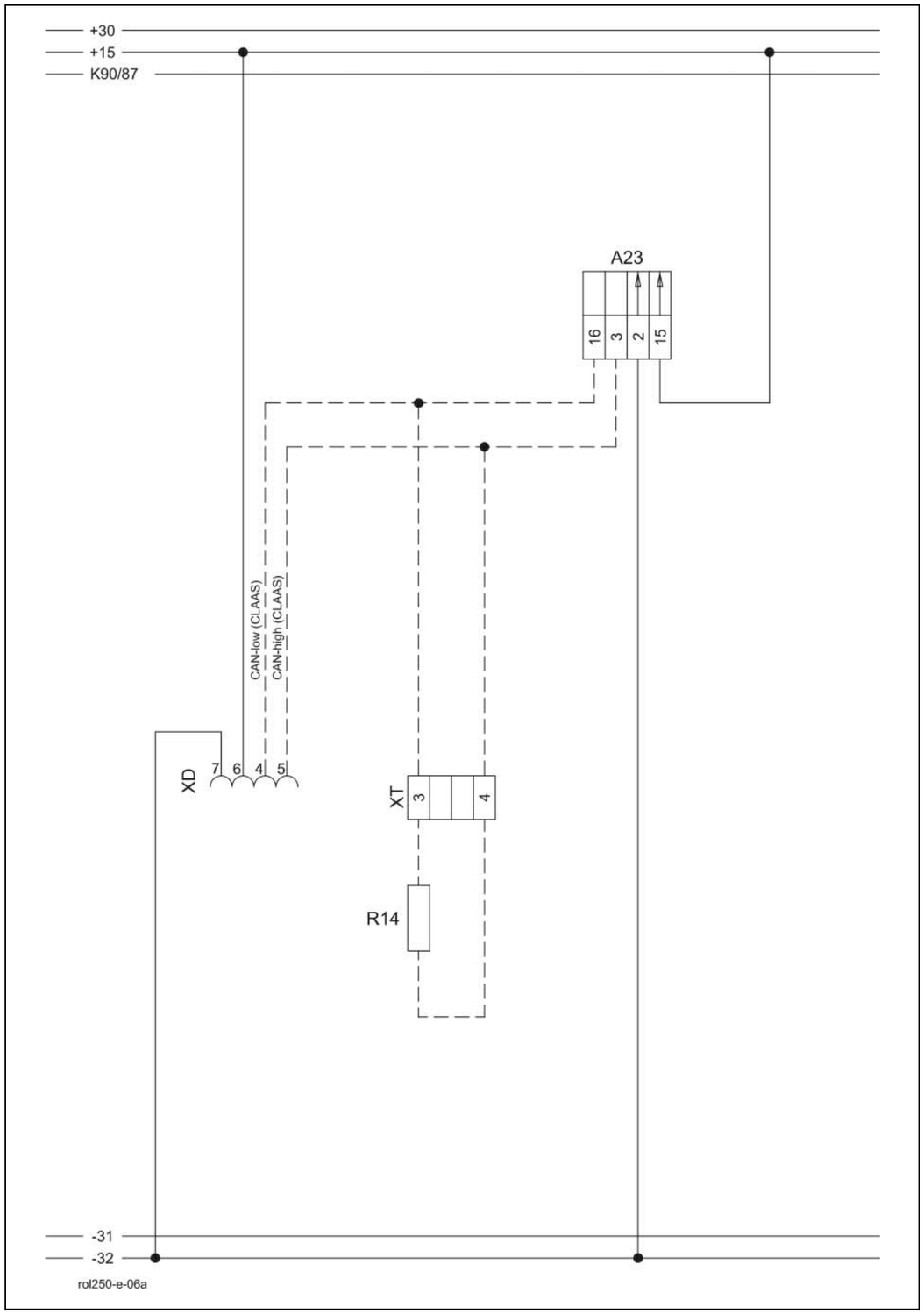
6a

CAN bus, module power supply

Rollant 240 Standard

Rollant 250 Standard

06a - CAN bus, module power supply Rollant 240/250 Standard



Key to diagram:

A23	ROLLANT 240/250 module	Wiring loom A - part 2
R14	CAN BUS matching resistor	Wiring loom A - part 1
XD	CAN Bus connector (7-pin)	Wiring loom B - part 2
XT	Terminal connector	Wiring loom A - part 1

Measured value table:

Item	Component	Measured value	Note
R14	Matching resistor	122 Ω	

Description of function:

Performance data

Connector XD serves for diagnosis with the Claas Diagnosis System CDS.

The performance data (total number of bales, operating hours, ...) are saved in module A 23. The CDS CLAAS Diagnosis System may be used to read out these data.

CAN bus
(Controller Area Network)

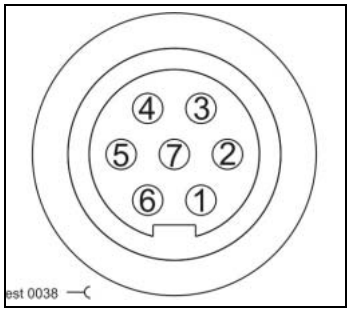
Data exchange between electronic components via a serial network.

- Measured value table CAN bus

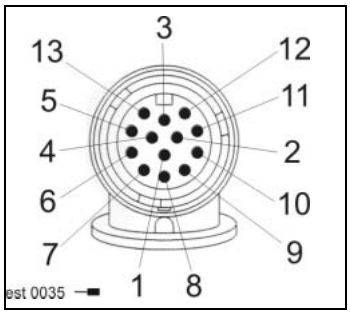
CAN high (U_{eff})	CAN low (U_{eff})	Diagnosis
2.52 V ± 0.1 V	2.49 V ± 0.1 V	System OK
2.50 V	2.50 V	Short circuit CAN high to CAN low
12 V	>2.50 V	Short circuit CAN high to +12 Volt
0 V	<2.5 V	Short circuit CAN high to earth
>2.50 V	12 V	Short circuit CAN low to +12 Volt
<2.50 V	0 V	Short circuit CAN low to earth

Connector pin definition

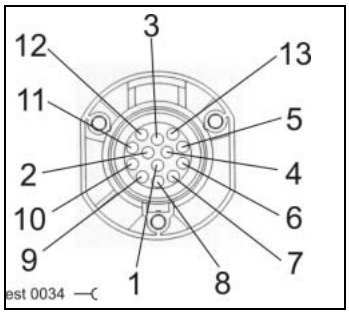
Socket XD



Connector XT



Socket XT



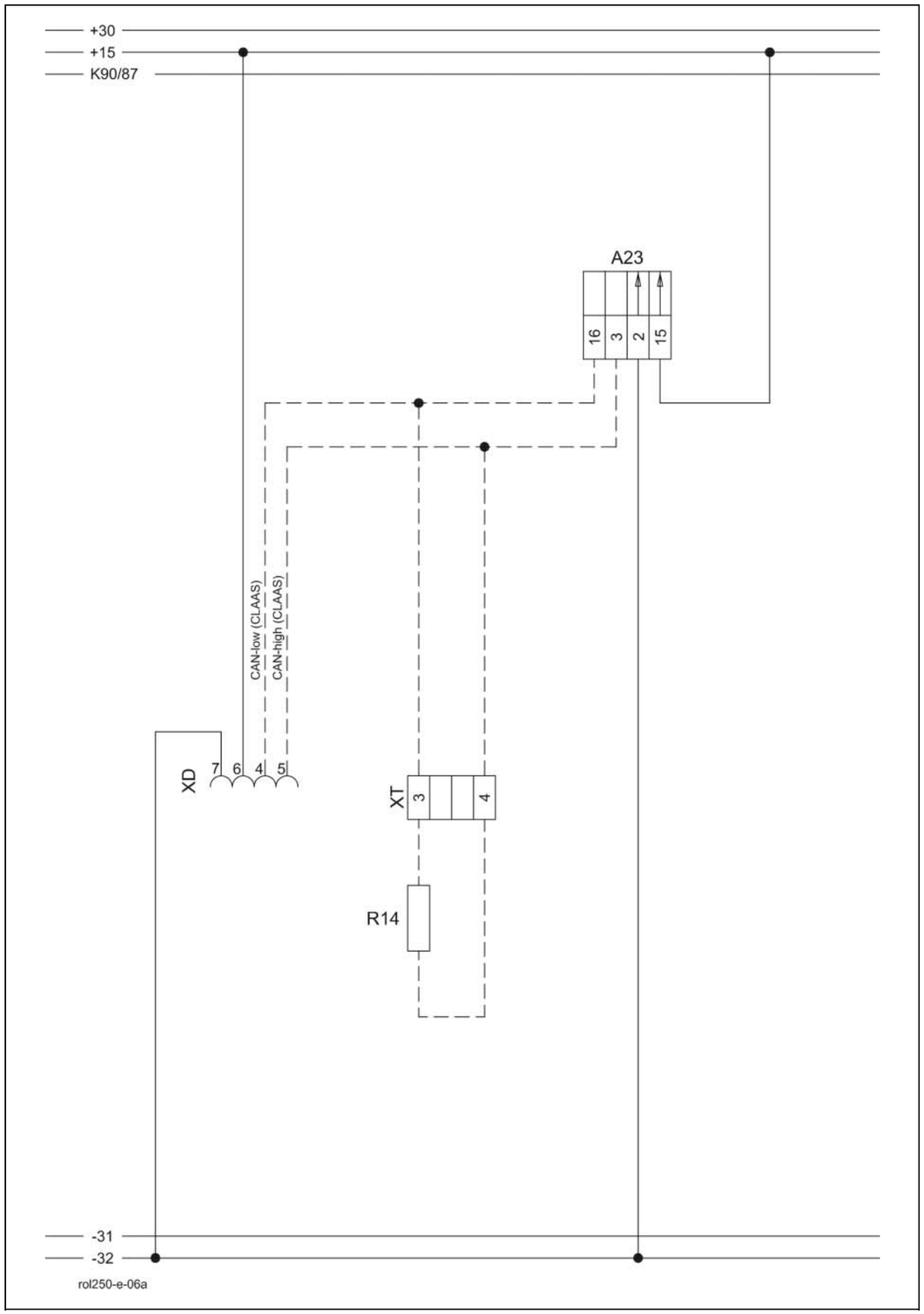
Connector	mm²	Colour
XD - 4	0.75	wt-br
XD - 5	0.75	wt-bk
XD - 6	0.75	bk-rd
XD - 7	0.75	br-rd
XT - 3	0.75	wt-br
XT - 4	0.75	wt-bk

6b

CAN bus, module power supply

Rollant 250 Comfort

06b - CAN bus, module power supply Rollant 250 Comfort



Key to diagram:

A23-1	ROLLANT 250 module 1	Wiring loom B/E - part 2
A23-2	ROLLANT 250 module 2	Wiring loom B/E - part 2
A30	CCT terminal	Wiring loom B/E - part 1
X10	Connector	Wiring loom B - part 2 / C
		Wiring loom E - part 2 / F
XD	CAN bus connector (7-pin)	Wiring loom B - part 2
XT1	Terminal connector	Wiring loom B/E - part 1
XT2	Terminal connector	Wiring loom B/E - part 1

Measured value table:

Item	Component	Measured value	Note
R14	Matching resistor	122 Ω	

Description of function:

Performance data

Connector XD serves for diagnosis with the Claas Diagnosis System CDS.

The performance data (total number of bales, operating hours, ...) are saved in modules A 23-1 and A 23-2.
Each of these modules takes over a defined part of the functions required for baling (see diagram).

Important: Module A 23-1 is connected to the same wiring loom as diagnosis connector XD.

Task assignment of modules

Function	Module 1	Module 2
Tailgate control	✓	
Circulation shut-off valve	✓	
Pick-up		✓
Twine, net wrapping	✓	
Rotocut knives (ON/OFF)		✓
Reverse rotor		✓

✓ Option

CAN bus
(Controller Area Network)

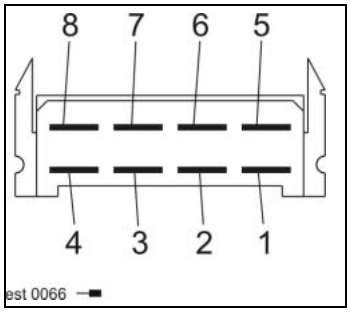
Data exchange between electronic components via a serial network.

- Measured value table CAN bus

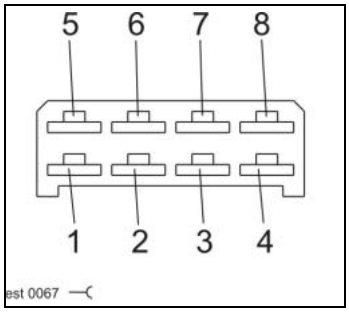
CAN high (U_{eff})	CAN low (U_{eff})	Diagnosis
2.52 V ± 0.1 V	2.49 V ± 0.1 V	System OK
2.50 V	2.50 V	Short circuit CAN high to CAN low
12 V	>2.50 V	Short circuit CAN high to +12 Volt
0 V	<2.5 V	Short circuit CAN high to earth
>2.50 V	12 V	Short circuit CAN low to +12 Volt
<2.50 V	0 V	Short circuit CAN low to earth

Connector pin definition

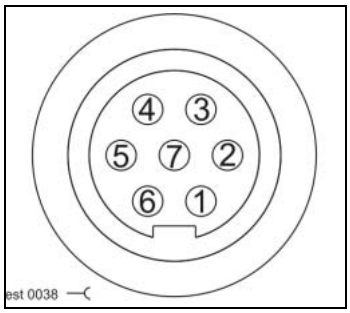
Connector X10



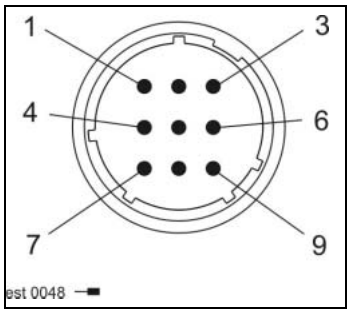
Socket X10



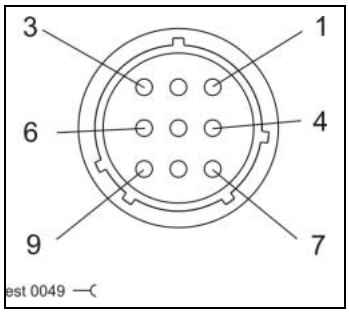
Socket XD



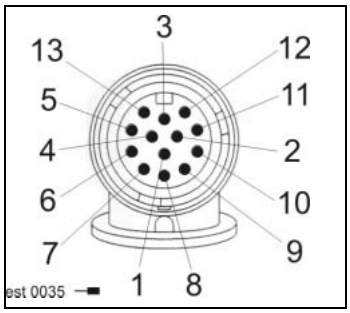
Connector XT1



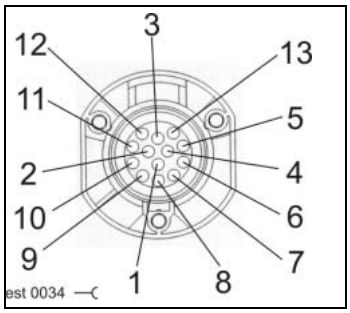
Socket XT1



Connector XT2



Socket XT2



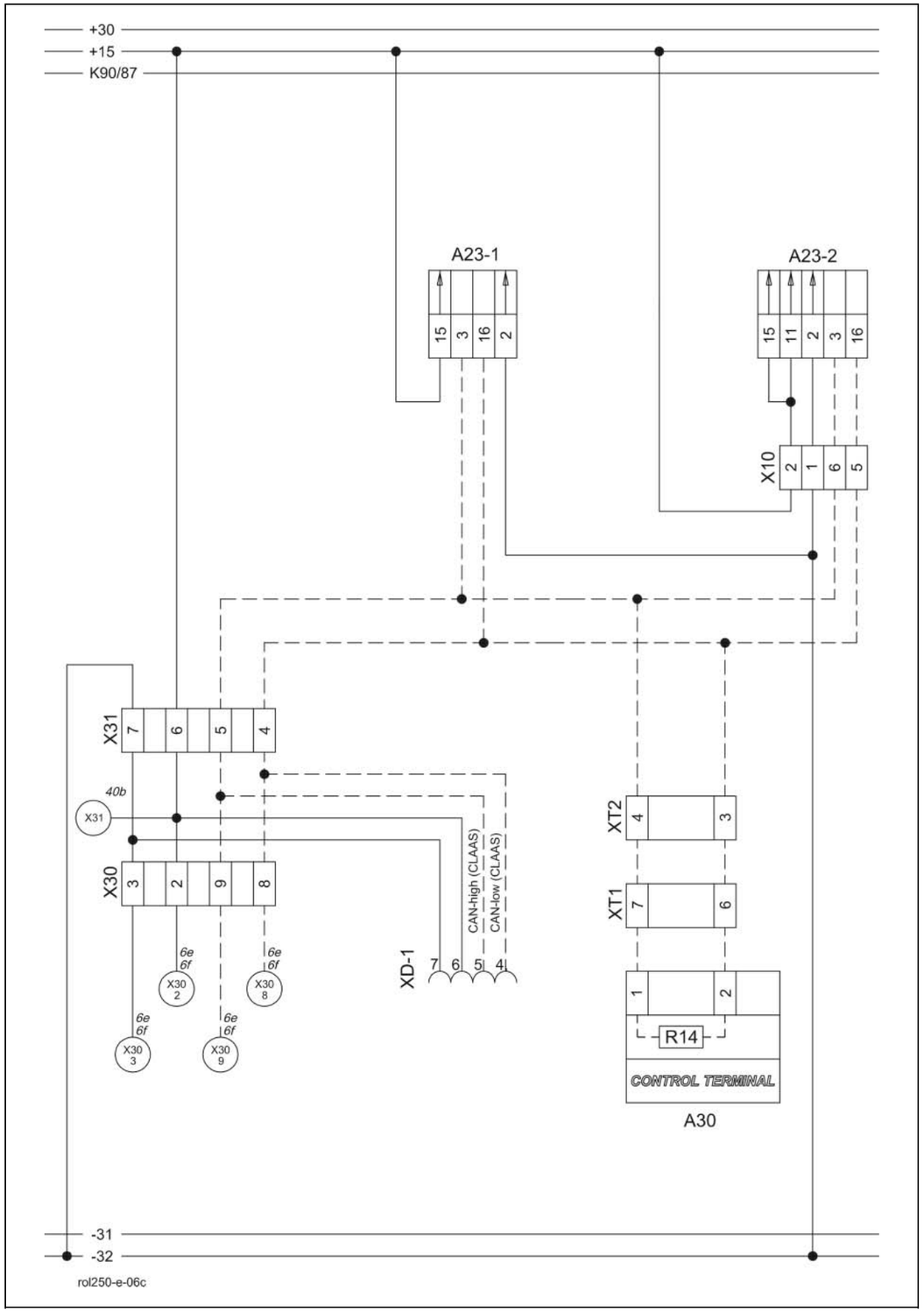
Connector	mm²	Colour
X10 - 1	1.0	br-rd
X10 - 2	1.0	bk-rd
X10 - 5	0.5	wt-br
X10 - 6	0.5	wt-bk
XD - 4	0.75	wt-br
XD - 5	0.75	wt-bk
XD - 6	0.75	bk-rd
XD - 7	0.75	br-rd
XT1 - 6	0.5	wt-br
XT1 - 7	0.5	wt-bk
XT2 - 3	0.5	wt-br
XT2 - 4	0.5	wt-bk

6c

CAN bus, module power supply

Rollant 250 Comfort for UNIWRAP

06c - CAN bus, module power supply Rollant 250 Comfort for UNIWRAP



Key to diagram:

A23-1	ROLLANT 250 module 1	Wiring loom B-part 2
A23-2	ROLLANT 250 module 2	Wiring loom B-part 2
A30	CCT terminal	Wiring loom B-part 1
X10	Connector	Wiring loom B-part 2 /C
X30	Connector	Wiring loom D/K
X31	Connector	Wiring loom D
XD1	CAN bus connector (7-pin)	Wiring loom D
XT1	Terminal connector	Wiring loom B-part 1
XT2	Terminal connector	Wiring loom B-part 1

Measured value table:

Item	Component	Measured value	Note
R14	Matching resistor	122 Ω	

Description of function:

Dati di produzione

Connector XD serves for diagnosis with the Claas Diagnosis System CDS.

The performance data (total number of bales, operating hours, ...) are saved in modules A 23-1 and A 23-2.
Each of these modules takes over a defined part of the functions required for baling (see diagram).

Important: Module A 23-1 is connected to the same wiring loom as diagnosis connector XD.

Task assignment of modules

Function	Module 1	Module 2
Tailgate control	✓	
Circulation shut-off valve	✓	
Pick-up		✓
Twine, net wrapping	✓	
Rotocut knives (ON/OFF)		✓
Reverse rotor		✓

✓ Option

CAN bus
(Controller Area Network)

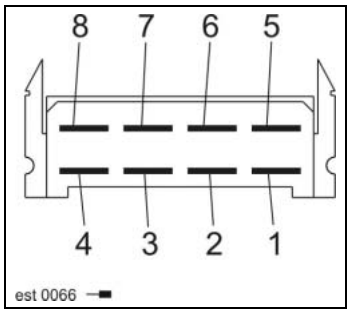
Data exchange between electronic components via a serial network.

- Measured value table CAN bus

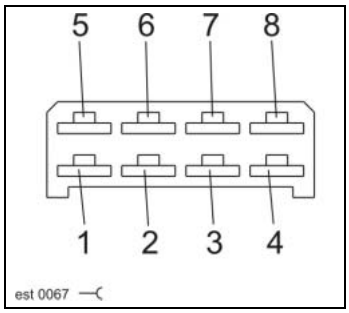
CAN high (U_{eff})	CAN low (U_{eff})	Diagnosis
2.52 V ± 0.1 V	2.49 V ± 0.1 V	System OK
2.50 V	2.50 V	Short circuit CAN high to CAN low
12 V	>2.50 V	Short circuit CAN high to +12 Volt
0 V	<2.5 V	Short circuit CAN high to earth
>2.50 V	12 V	Short circuit CAN low to +12 Volt
<2.50 V	0 V	Short circuit CAN low to earth

Connector pin definition

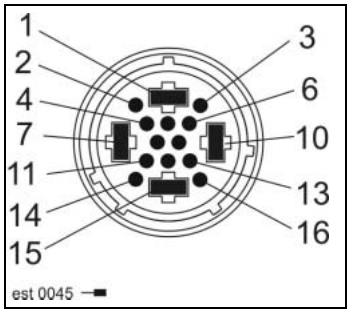
Connector X10



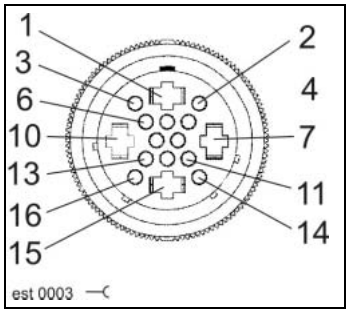
Socket X10



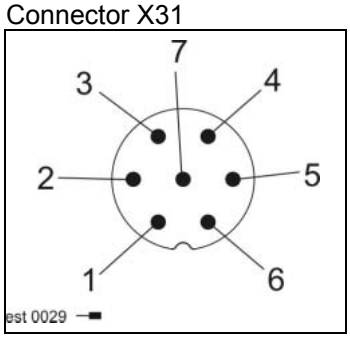
Connector X30



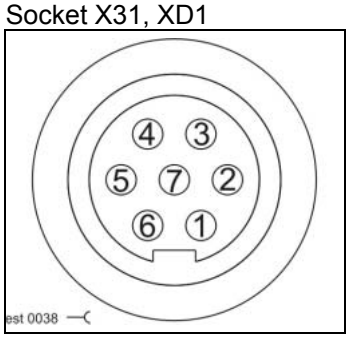
Socket X30



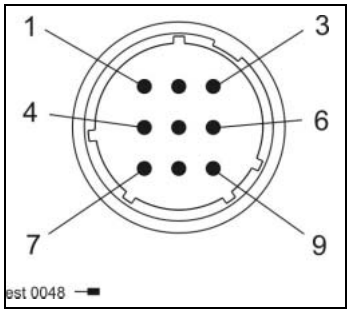
Connector X31



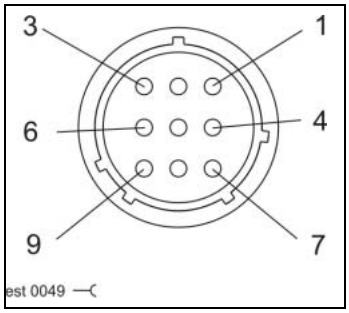
Socket X31, XD1



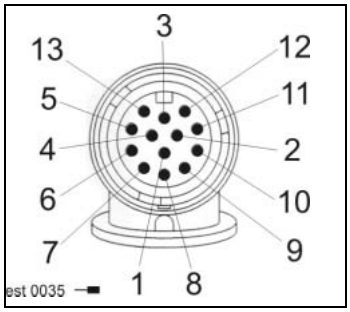
Connector XT1



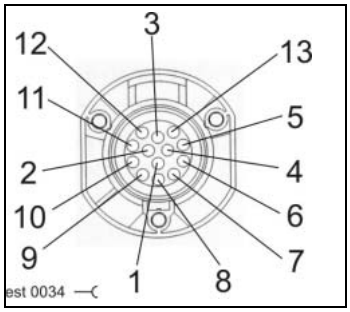
Socket XT1



Connector XT2



Socket XT2



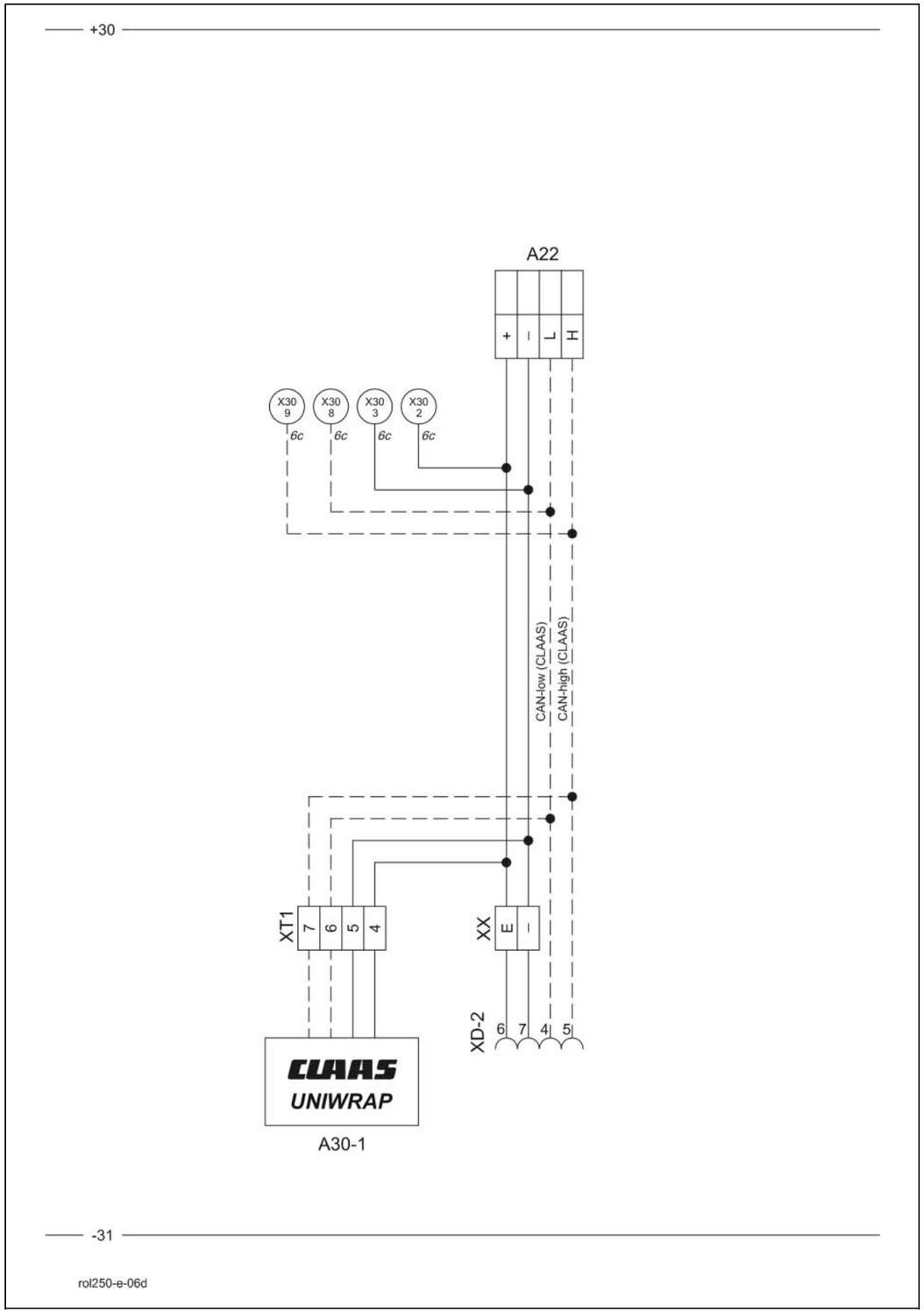
Connector	mm²	Colour
X10 - 1	1.0	br-rd
X10 - 2	1.0	bk-rd
X10 - 5	0.5	wt-br
X10 - 6	0.5	wt-bk
X30 - 2	0.75	bk-rd
X30 - 3	0.75	br-rd
X30 - 8	0.75	wt-br
X30 - 9	0.75	wt-bk
X31 - 4	0.75	wt-br
X31 - 5	0.75	wt-bk
X31 - 6	0.75	bk-rd
X31 - 7	0.75	br-rd
XD1 - 4	0.75	wt-br
XD1 - 5	0.75	wt-bk
XD1 - 6	0.75	bk-rd
XD1 - 7	0.75	br-rd
XT1 - 6	0.5	wt-br
XT1 - 7	0.5	wt-bk
XT2 - 3	0.5	wt-br
XT2 - 4	0.5	wt-bk

6d

CAN bus, module power supply

UNIWRAP up to serial no. 72900130

06d - CAN bus, module power supply UNIWRAP up to serial no. 72900130



Key to diagram:

A30-1	Bale wrapper terminal	ZE
A22	Bale wrapper module	ZE
RS 232	Data link	ZE
X30	Connector ... Wiring loom D / K	
XD2	CAN bus connector (7-pin)	ZE
XT1	Terminal connector (Uniwrap)	ZE
X-X	Socket ZE	ZE

Measured value table:

Item	Component	Measured value	Note
R14	Matching resistor	122 Ω	

Description of function:

Performance data

All performance data (total number of bales, ...) are saved in module A 22 and may be read even after deletion in terminal A30 or A30-1, using the CDS Claas Diagnosis System.

Data communication

The baler and the bale wrapper are connected via the CAN bus.

Electronics plus 15

Electronics plus 15 activates module A22.

RS 232

The RS 232 connection serves as a data link with the CDS Claas Diagnosis System.

Connector XD2 serves for diagnosis with the Claas Diagnosis System CDS.

Terminal

Terminal A30-1 is used for operating the bale wrapper.
It serves for manual operation, diagnosis, selecting the operating mode and set values and for informing the operator about the current operating mode.

CAN bus
(Controller Area Network)

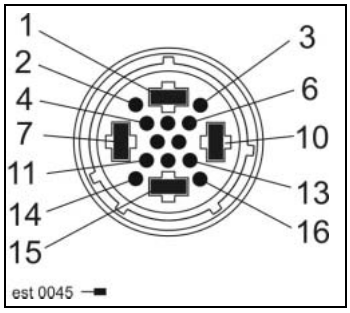
Data exchange between electronic components via a serial network.

- Measured value table CAN bus

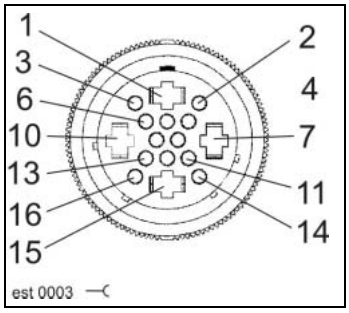
CAN high (U_{eff})	CAN low (U_{eff})	Diagnosis
2.52 V ± 0.1 V	2.49 V ± 0.1 V	System OK
2.50 V	2.50 V	Short circuit CAN high to CAN low
12 V	>2.50 V	Short circuit CAN high to +12 Volt
0 V	<2.5 V	Short circuit CAN high to earth
>2.50 V	12 V	Short circuit CAN low to +12 Volt
<2.50 V	0 V	Short circuit CAN low to earth

Connector pin definition

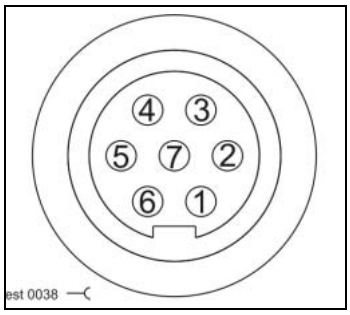
Connector X30



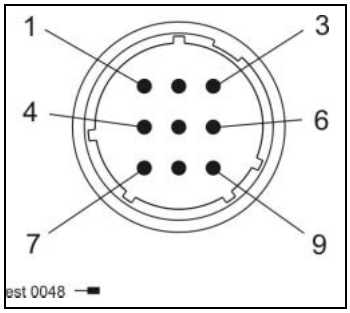
Socket X30



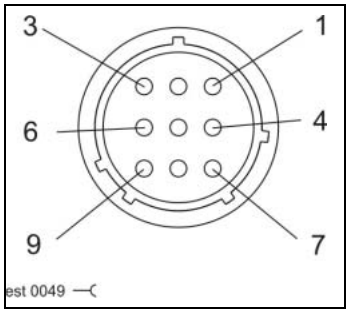
Socket XD2



Connector XT1



Socket XT1



Connector	mm²	Colour
X30 - 2	1.5	br
X30 - 3	1.5	bl
X30 - 8	1.5	bk
X30 - 9	1.5	gn-ye
XD2 - 4	0.75	bl
XD2 - 5	0.75	bl
XD2 - 6	0.75	rd
XD2 - 7	0.75	vi

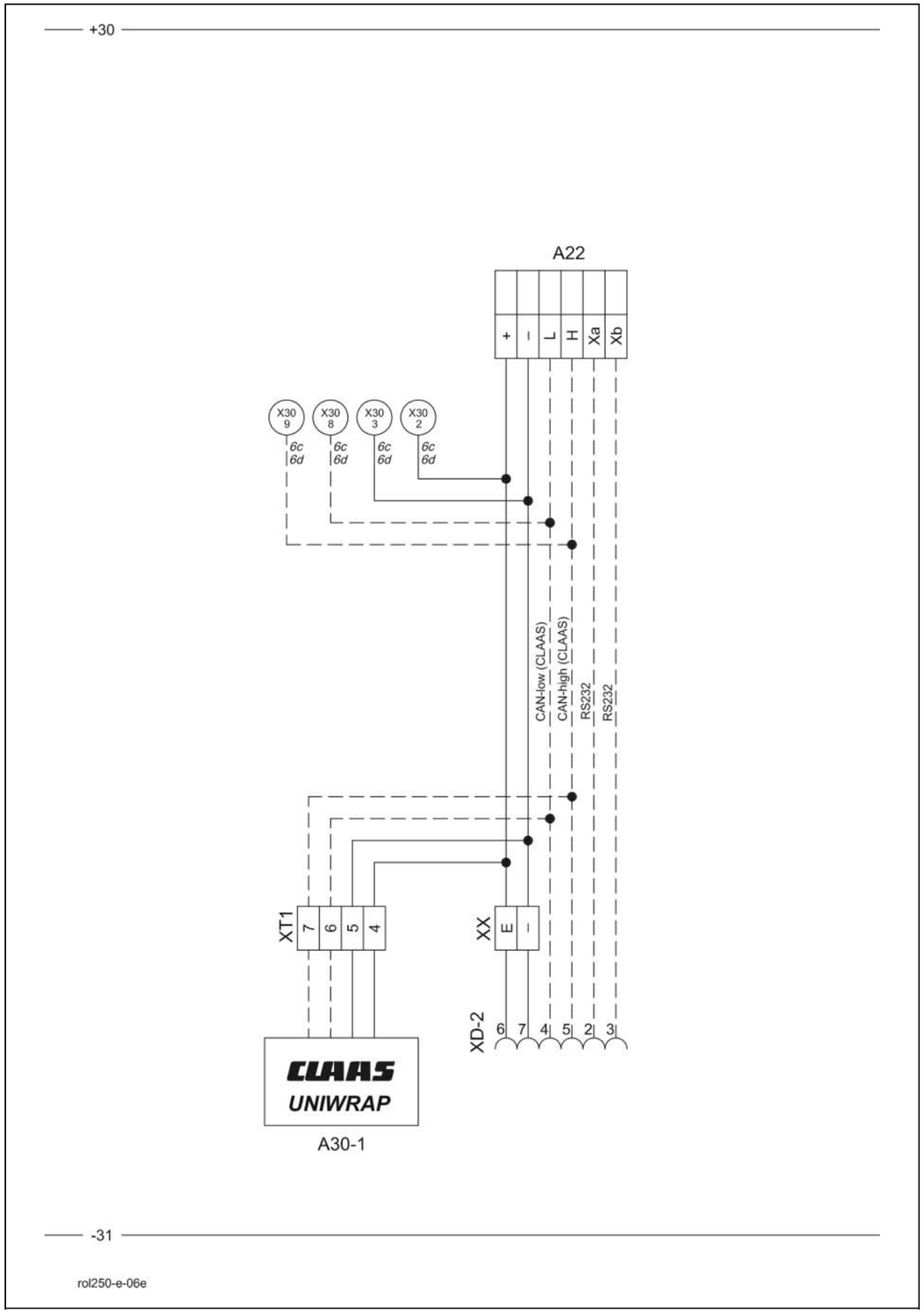
Connector	mm²	Colour
XT1 - 4	1.5	br
XT1 - 5	1.5	bl
XT1 - 6	1.5	bk
XT1 - 7	1.5	gn-ye
XX-E	1.5	rd
XX-I	1.5	vio

6e

CAN bus, module power supply

UNIWRAP from serial no. 72900131

06e - CAN bus, module power supply UNIWRAP from serial no. 72900131



Key to diagram:

A30-1	Bale wrapper terminal	ZE
A22	Bale wrapper module	ZE
RS 232	Data link	ZE
X30	Connector	Wiring loom D / K
Xa/Xb	Connector band	ZE
XD2	CAN bus connector (7-pin)	ZE
XT1	Terminal connector (Uniwrap)	ZE
X-X	Socket ZE	ZE

Measured value table:

Item	Component	Measured value	Note
R14	Matching resistor	122 Ω	

Description of function:

Performance data

All performance data (total number of bales, ...) are saved in module A 22 and may be read even after deletion in terminal A30 or A30-1, using the CDS Claas Diagnosis System.

Data communication

The baler and the bale wrapper are connected via the CAN bus.

Electronics plus 15

Electronics plus 15 activates module A22.

RS 232

The RS 232 connection serves as a data link with the CDS Claas Diagnosis System.

Connector XD2 serves for diagnosis with the Claas Diagnosis System CDS.

Terminal

Terminal A30-1 is used for operating the bale wrapper.
It serves for manual operation, diagnosis, selecting the operating mode and set values and for informing the operator about the current operating mode.

CAN bus
(Controller Area Network)

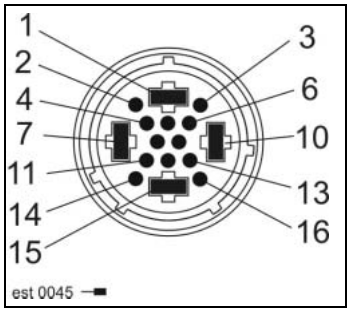
Data exchange between electronic components via a serial network.

- Measured value table CAN bus

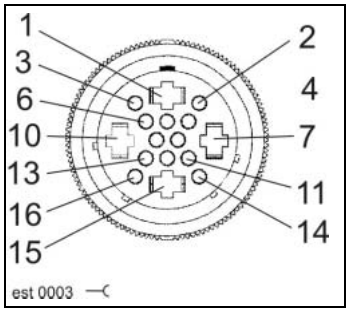
CAN high (U_{eff})	CAN low (U_{eff})	Diagnosis
2.52 V ± 0.1 V	2.49 V ± 0.1 V	System OK
2.50 V	2.50 V	Short circuit CAN high to CAN low
12 V	>2.50 V	Short circuit CAN high to +12 Volt
0 V	<2.5 V	Short circuit CAN high to earth
>2.50 V	12 V	Short circuit CAN low to +12 Volt
<2.50 V	0 V	Short circuit CAN low to earth

Connector pin definition

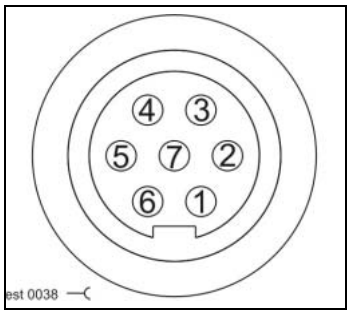
Connector X30



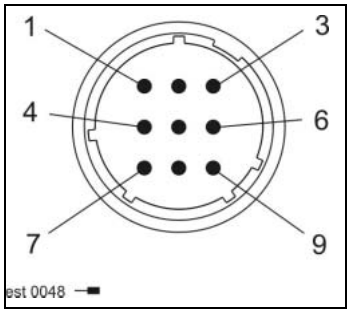
Socket X30



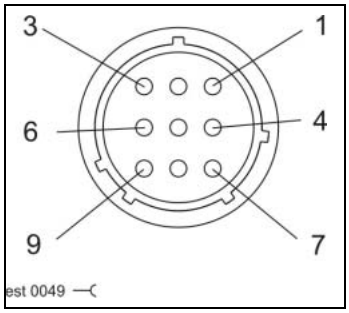
Socket XD2



Connector XT1



Socket XT1



Connector	mm²	Colour
X30 - 2	1.5	br
X30 - 3	1.5	bl
X30 - 8	1.5	bk
X30 - 9	1.5	gn-ye
XD2 - 2	0.75	
XD2 - 3	0.75	
XD2 - 4	0.75	bl
XD2 - 5	0.75	bl
XD2 - 6	0.75	rd
XD2 - 7	0.75	vi

Connector	mm²	Colour
XT1 - 4	1.5	br
XT1 - 5	1.5	bl
XT1 - 6	1.5	bk
XT1 - 7	1.5	gn-ye
XX - E	1.5	rd
XX - I	1.5	vio

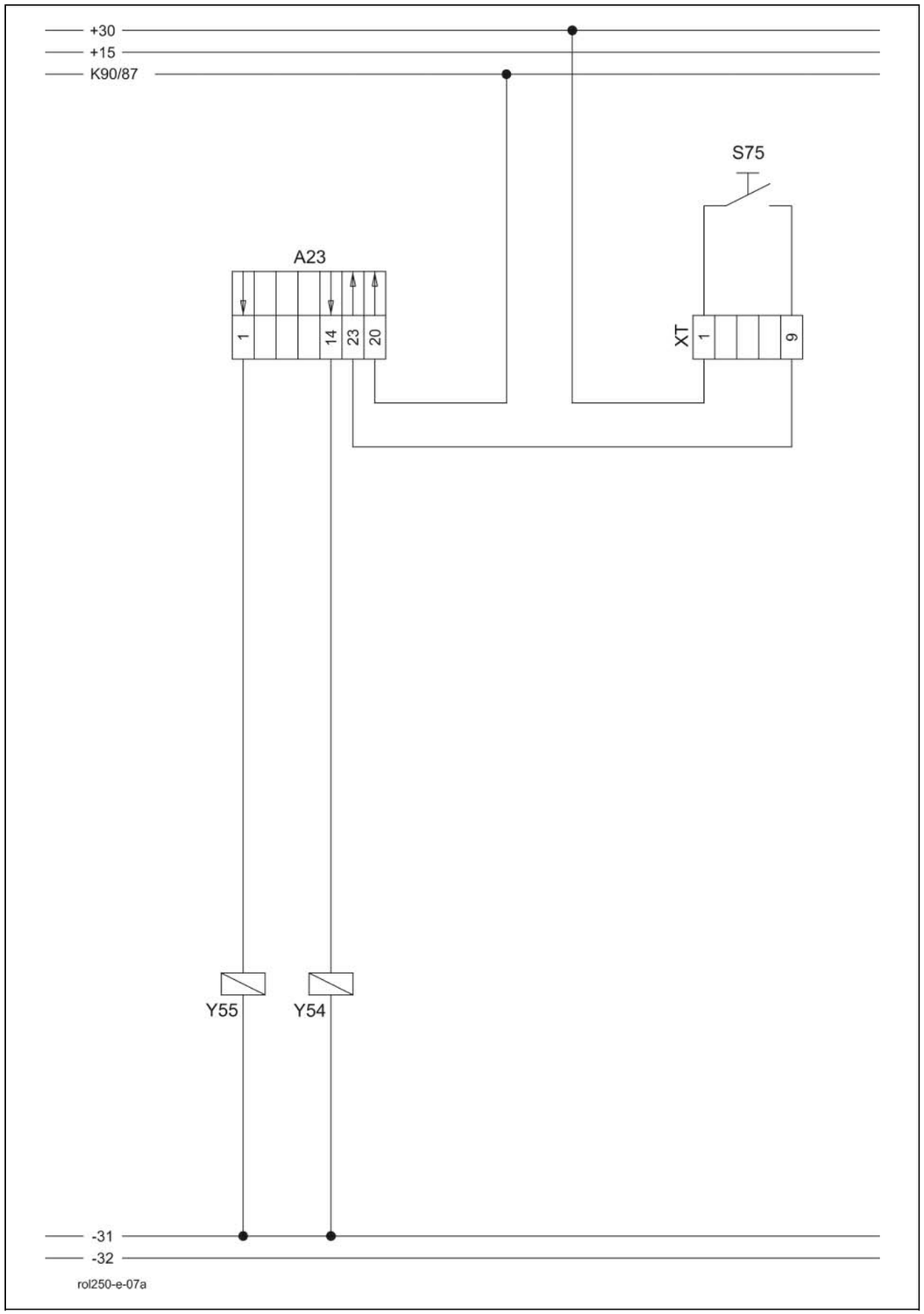
7a

Rotocut

Rollant 240 Standard

Rollant 250 Standard

07a - Rotocut Rollant 240/250 Standard



Key to diagram:

A23	ROLLANT 240/250 module	Wiring loom A-part 2
S75	Main switch ON / OFF - Rotocut ON / OFF	Wiring loom A-part 1
Y54	ROTOCUT knives OFF solenoid coil	Wiring loom A-part 2
Y55	ROTOCUT knives ON solenoid coil	Wiring loom A-part 2
XT	Terminal connector	Wiring loom A-part 1

Measured value table:

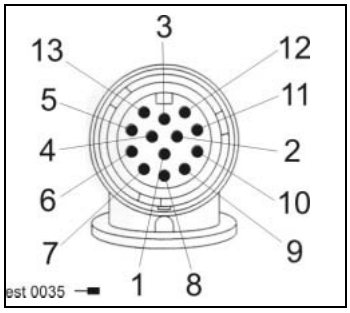
Item	Component	Measured value	Note
Y54 Y55	Solenoid coil	3.8 A; 3.2 Ω	

Description of function:

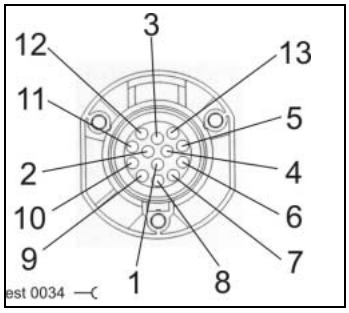
Function pre-selection	The Rotocut position is pre-selected by means of main switch ON / OFF - ROTOCUT ON / OFF S75 (S75 closed = ROTOCUT ON). For ROTOCUT operation, module A 23 controls the corresponding solenoid coils Y 54/Y55.
ROTOCUT ON	When the ROTOCUT knives ON solenoid coil Y55 is actuated and the pick-up is raised, the knives swing in - ROTOCUT ON.
ROTOCUT OFF	When the ROTOCUT knives OFF solenoid coil Y54 is actuated and the pick-up is lowerd, the knives are forced out by the baled material - ROTOCUT OFF.

Connector pin definition

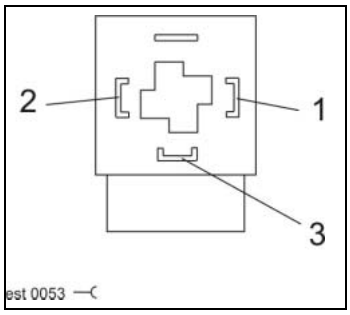
Connector XT



Socket XT



Socket Y54/Y55



Connector	mm²	Colour
XT - 1	1.5	bk
XT - 9	0.75	br-gr
Y54 - 1	1.0	br
Y54 - 2	1.0	bk-bl
Y55 - 1	1.0	br
Y55 - 2	1.0	bk-gr

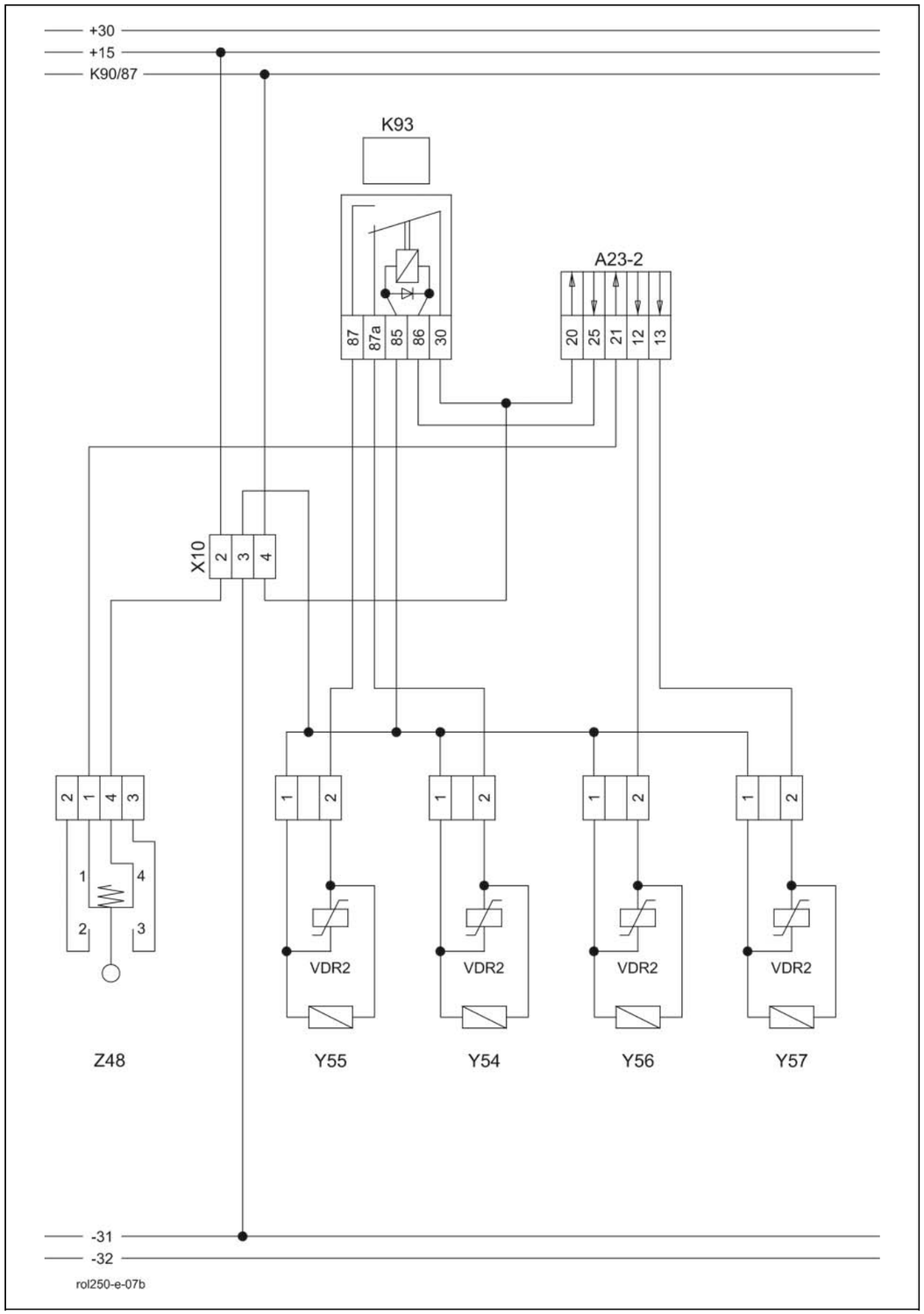
7b

Rotocut

Rollant 250 Comfort

Rollant 250 Comfort for UNIWRAP

07b - Rotocut Rollant 250 Comfort / Comfort for UNIWRAP



Key to diagram:

A23-2	ROLLANT 250 module 2	Wiring loom B-part 2
K93	ROTOCUT knives ON/OFF relay	Wiring loom B-part 2
VDR2	Varistor	not shown
Y54	ROTOCUT knives OFF solenoid coil	Wiring loom C
Y55	ROTOCUT knives ON solenoid coil	Wiring loom C
Y56	Rotor reverse solenoid coil (extend cylinder)	Wiring loom C
Y57	Rotor reverse solenoid coil (retract cylinder)	Wiring loom C
X10	Separating point wiring loom B / C	Wiring loom B-part 2 /C
Z48	Reverser actual value switch	Wiring loom C

Measured value table:

Item	Component	Measured value	Note
Y54 Y55 Y56 Y57	Solenoid coil	3.8 A; 3.2 Ω	

Description of function:

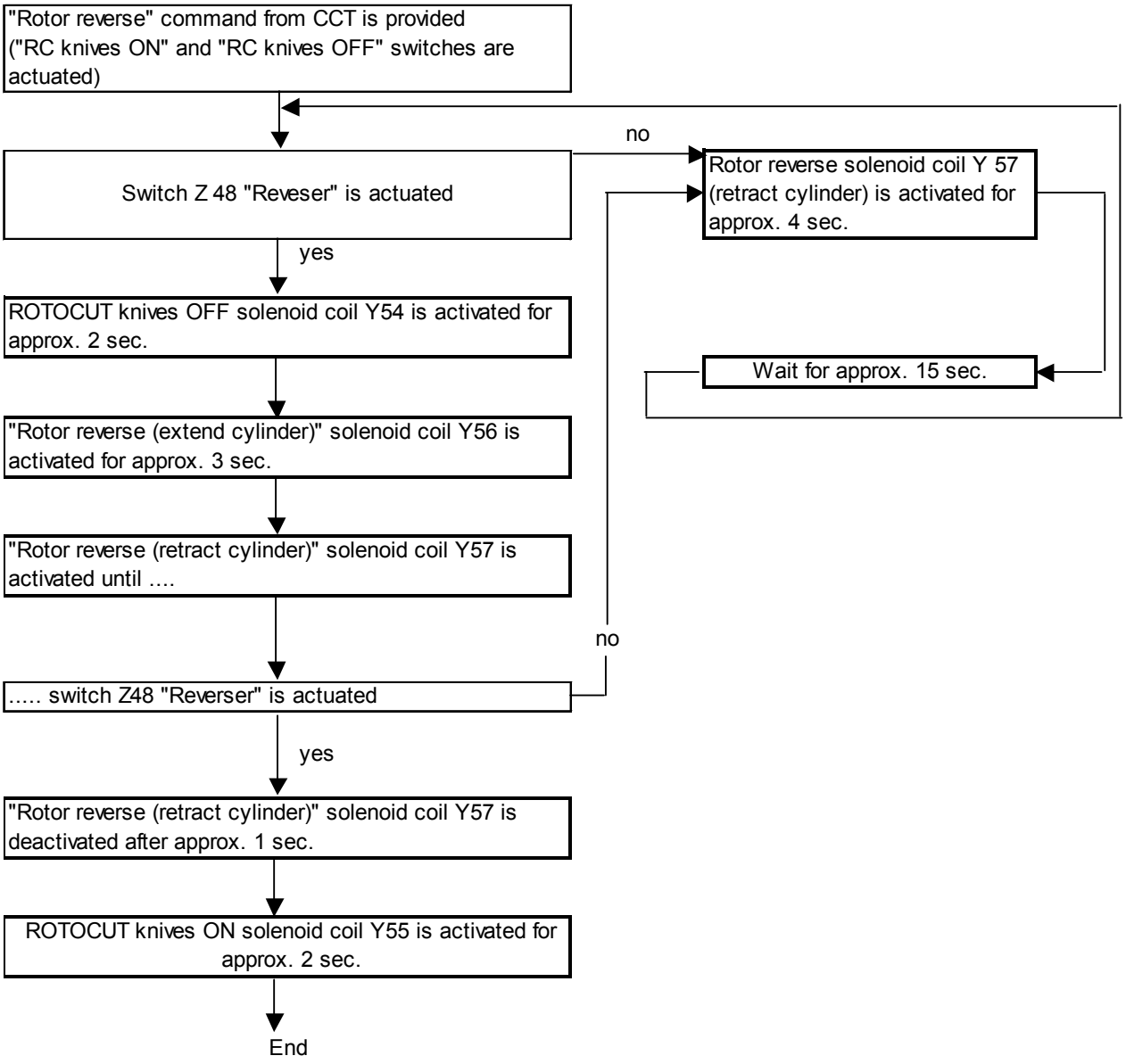
ROTOCUT ON / OFF	For ROTOCUT operation, module A 23-2 actuates the corresponding solenoid coils Y 54/Y55 via relay K 93. Circulation shut-off valve Y77 is also actuated in parallel with ROTOCUT ON solenoid coil Y55 because this function requires pressure build-up within the system. When the ROTOCUT OFF function is active, solenoid coil Y54 is actuated. The knives are forced out by the baled material.
Rotor reverse	When the rotor is plugged, terminal A 30 can be used to activate the rotor reverse function. To operate the rotor reverser, module A 23– 2 actuates the corresponding rotor reverse solenoid coils Y 56/Y57. Circulation shut-off valve Y77 is also actuated in parallel with the solenoid coils Y56/Y57 because this function requires pressure build-up within the system. The reverser actual value switch Z 48 transmits a signal to module A23-2 when the rotor reverse cylinder 337 is retracted.

Settings:

- Reverser actual value switch Z48	Set the switch so that it can be pushed 5 mm max. (For functional check see sequence diagram).

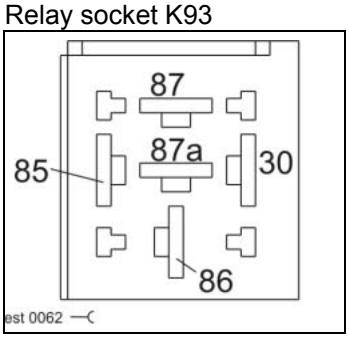
Automatic sequence "Rotor reverse" ROLLANT 250

Hydraulic oil and electric power supply on the baler are provided.

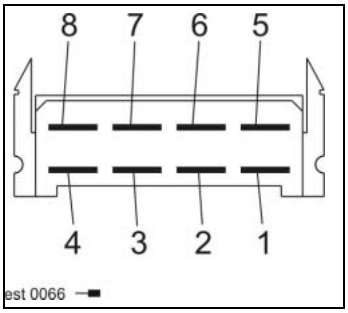


Connector pin definition

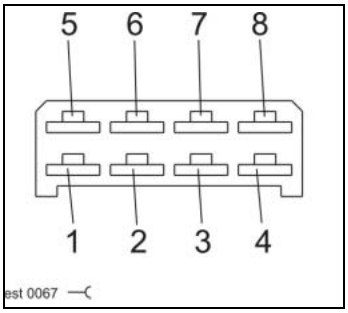
Relay socket K93



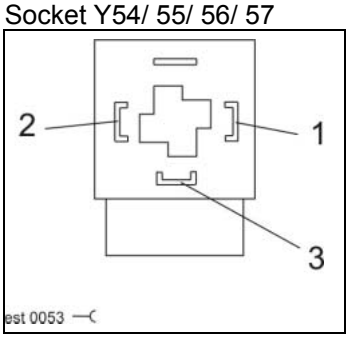
Connector X10



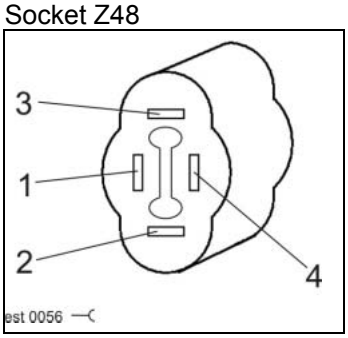
Socket X10



Socket Y54/ 55/ 56/ 57



Socket Z48



Connector	mm²	Colour
K93-30	1.5	bk-wt
K93-85	0.5	br
K93-86	0.75	rd
K93-87	0.75	gn-bl
K93-87a	0.75	ye-bl
X10-2	1.0	bk-rd
X10-3	2.5	br
X10-4	2.5	bk-wt

Connector	mm²	Colour
Y54-1	0.75	br
Y54-2	0.75	ye-bl
Y55-1	0.75	br
Y55-2	0.75	gn-bl
Y56-1	0.75	br
Y56-2	0.75	ye-bk
Y57-1	0.75	br
Y57-2	0.75	bk-gn
Z48-1	0.5	gr-or
Z48-4	0.5	bk-rd

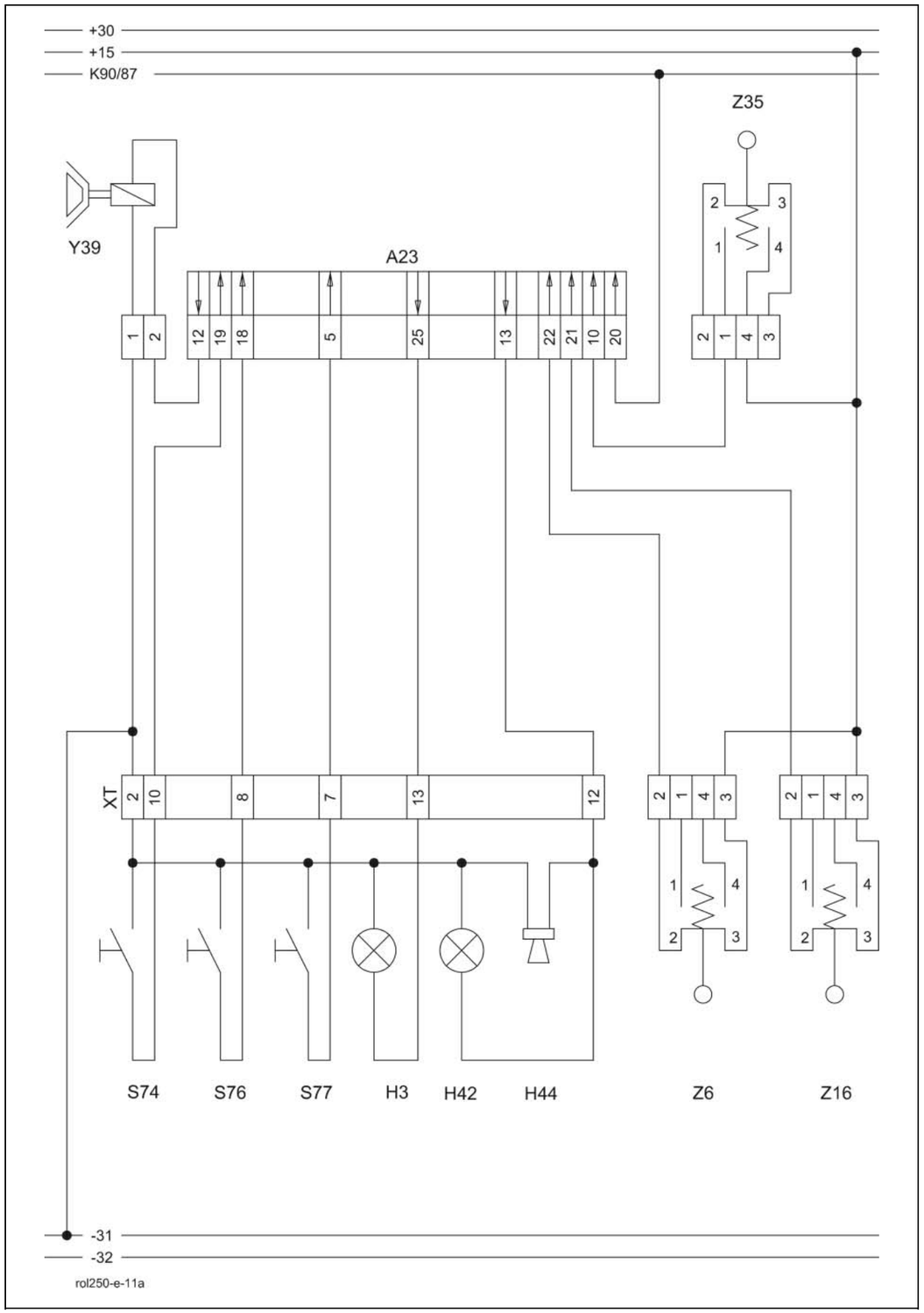
11a

Wrapping release

Rollant 240 Standard

Rollant 250 Standard

11a - Wrapping release Rollant 240/250 Standard



Key to diagram:

A23	ROLLANT 240/250 module	Wiring loom A - part 2
H3	Operating light	Wiring loom A - part 1
H42	STOP light	Wiring loom A - part 1
H44	Buzzer	A - part 1
S74	Wrapping type selection switch	Wiring loom A - part 1
S76	Wrapping delay switch (manual)	Wiring loom A - part 1
S77	Wrapping release switch (manual)	Wiring loom A - part 1
XT	Terminal connector	Wiring loom A - part 1
Y39	Twine/net coupling solenoid coil	Wiring loom A - part 2
Z6	Bale ejector actual value switch	Wiring loom A - part 2
Z16	Tailgate closed actual value switch	Wiring loom A - part 2
Z35	Cam track actual value switch	Wiring loom A - part 1

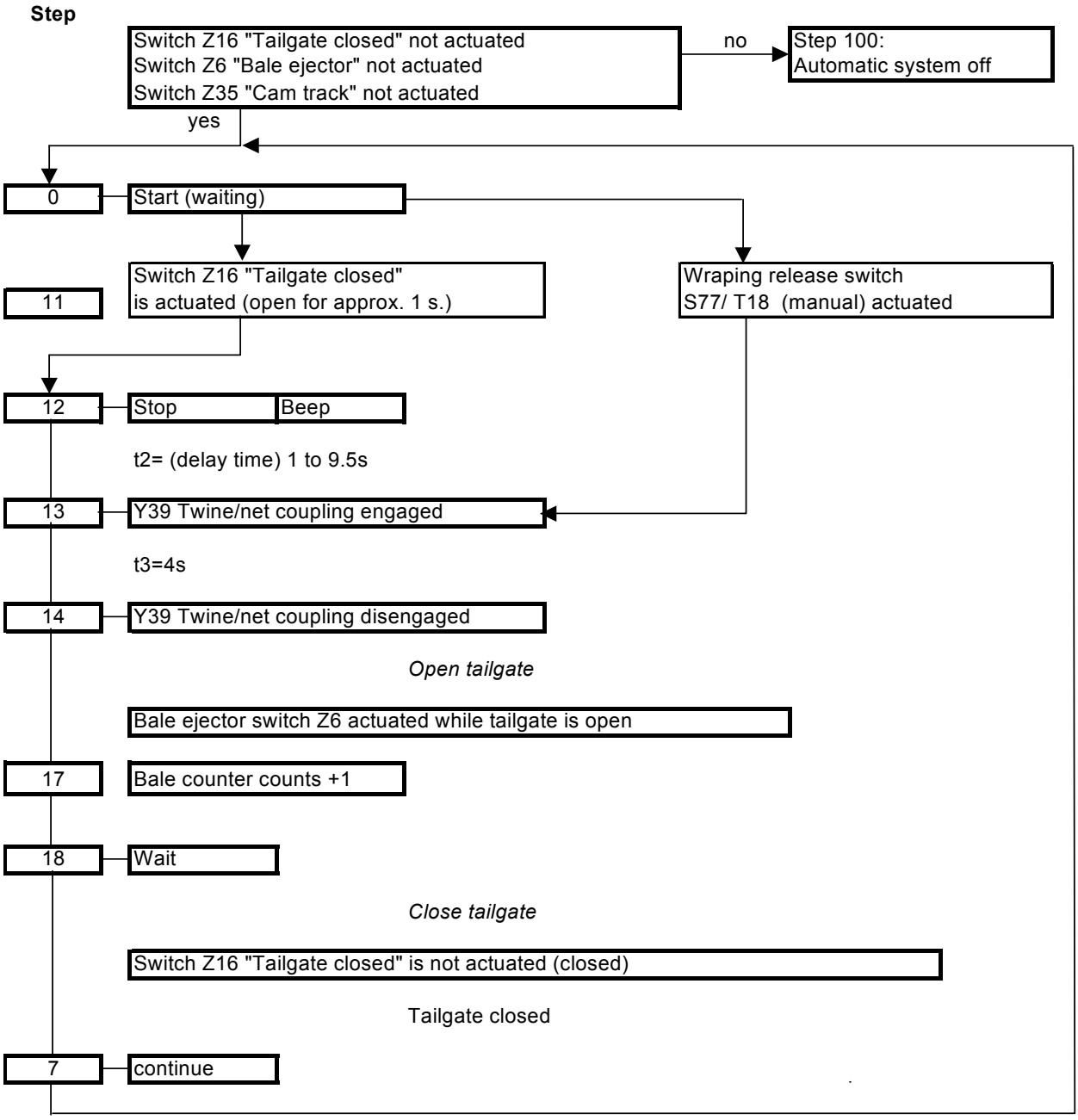
Description of function:

Operational readiness	The machine is ready for automatic wrapping when signal light H3 lights up. Fast blinking of signal light H3 means that the machine is **not** ready for operation. In this case, the bale ejector actual value switch Z6, the tailgate closed switch Z16 and / or the cam track switch Z35 are actuated (see sequence diagram).
Selection of wrapping type	The wrapping type (net / twine) is pre-selected using switch S 74. After this, further modifications must be carried out (see Operator's Manual).
Automatic wrapping release	A completely filled bale chamber makes the baler reach the pre-set hydraulic baling pressure. The tailgate is pushed open by approx. 5 cm. Signal light H3 starts blinking slowly. The wrapping process is started automatically (see sequence diagram).
Early wrapping release	When actuating the wrapping release switch (manual) S77, the start of the wrapping process may be released early.
Wrapping process delay	When actuating the wrapping delay switch (manual) S76, the start of the wrapping process may be delayed. The wrapping process will start automatically only after switch S76 has been released.

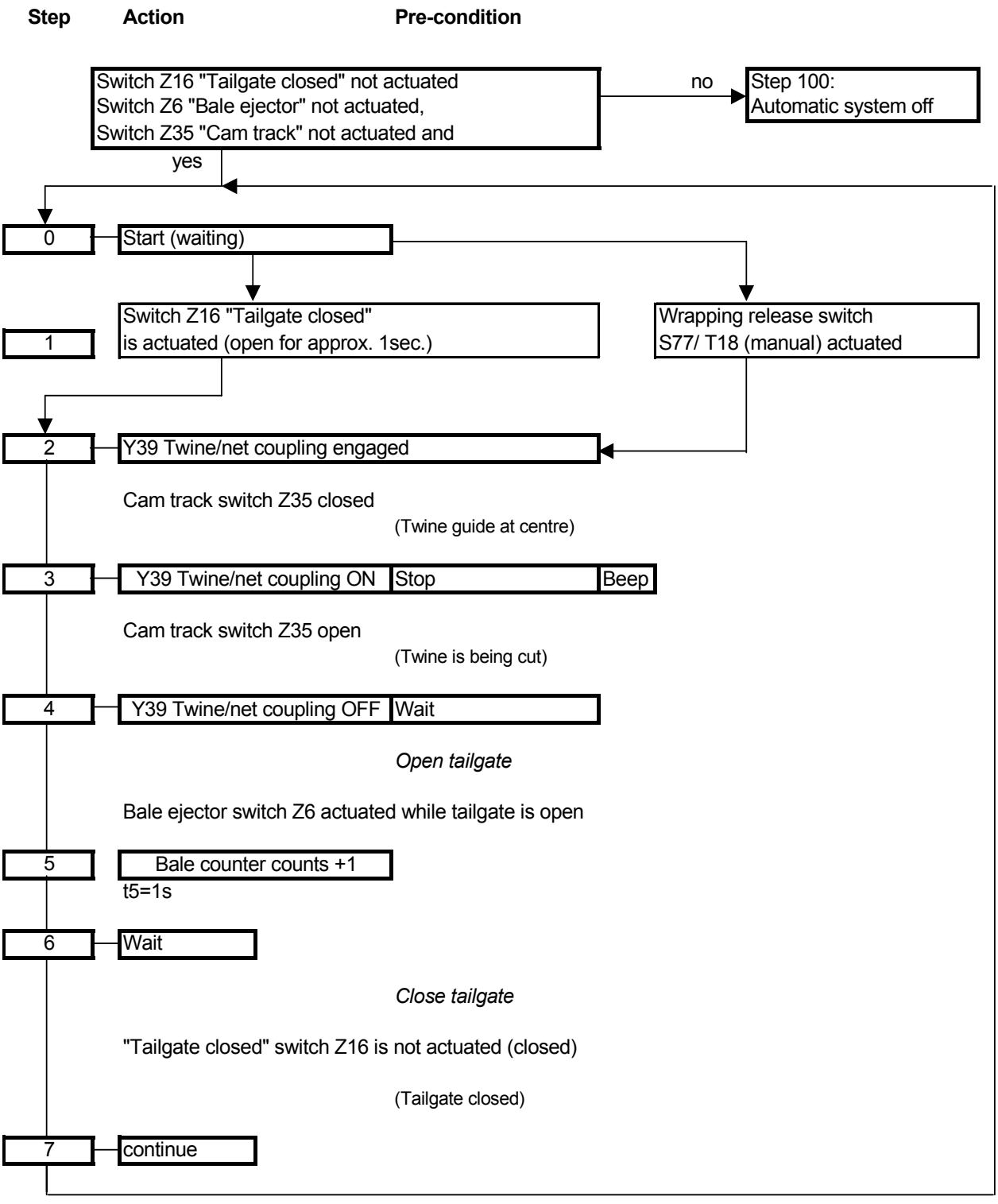
Settings:

- Bale ejector actual value switch Z6	Set the switch so that it can be pushed 5 mm max. (for functional check see sequence diagram).
- Tailgate closed actual value switch Z16	Open the tailgate to 30 ± 5 mm. The gap at the elevation of the centre of rotation of roller no. 5 shall serve as measuring point. Adjust the adjusting screw on the tailgate so that the switch changes its signal at this position and that wrapping is started. Adjust the mechanical limit so that the switch can be pushed 5 mm max.
- Cam track actual value switch Z35	Set the switch so that it can be pushed 5 mm max. (for functional check see sequence diagram).

Net wrapping sequence diagram (Rollant 240/250)

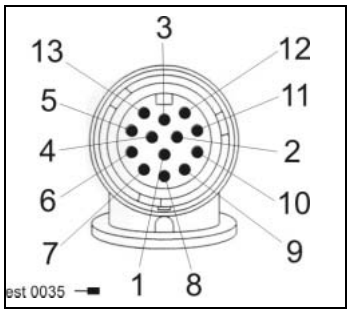


Twine wrapping sequence diagram (Rollant 240/250)

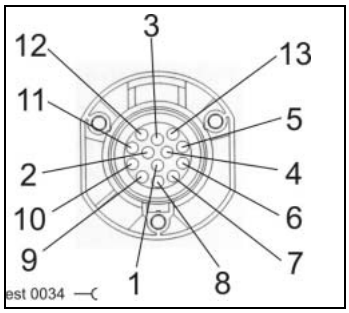


Connector pin definition

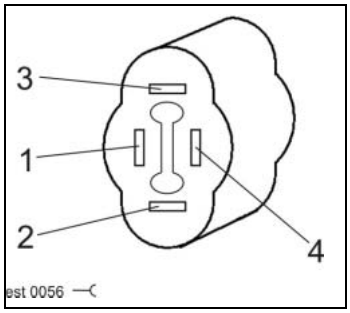
Connector XT



Socket XT



Socket Z6/ 16/ 35



Connector pin definition

Connector	mm²	Colour
XT1- 2	1.5	br
XT1 - 7	0.75	br-ye
XT1 - 8	0.75	br-bl
XT1 - 10	0.75	bl-gr
XT1 - 12	0.75	bk-bl
XT1 - 13	0.75	xx-xx
XT2 - 2	1.5	br
XT2 - 7	0.75	br-ye
XT2 - 8	0.75	br-bl
XT2 - 10	0.75	bl-gr
XT2 - 12	0.75	bk-bl
XT2 - 13	0.75	xx-xx

Connector	mm²	Colour
Y39 - 1	1.0	br
Y39 - 2	1.0	bk-ye
Z 6 - 2	0.75	bl-rd
Z 6 - 3	0.75	bk-rd
Z16 - 2	0.75	bl-ye
Z16 - 3	0.75	bk-rd
Z35 - 1	0.75	br-bk
Z35 - 4	0.75	bk-rd

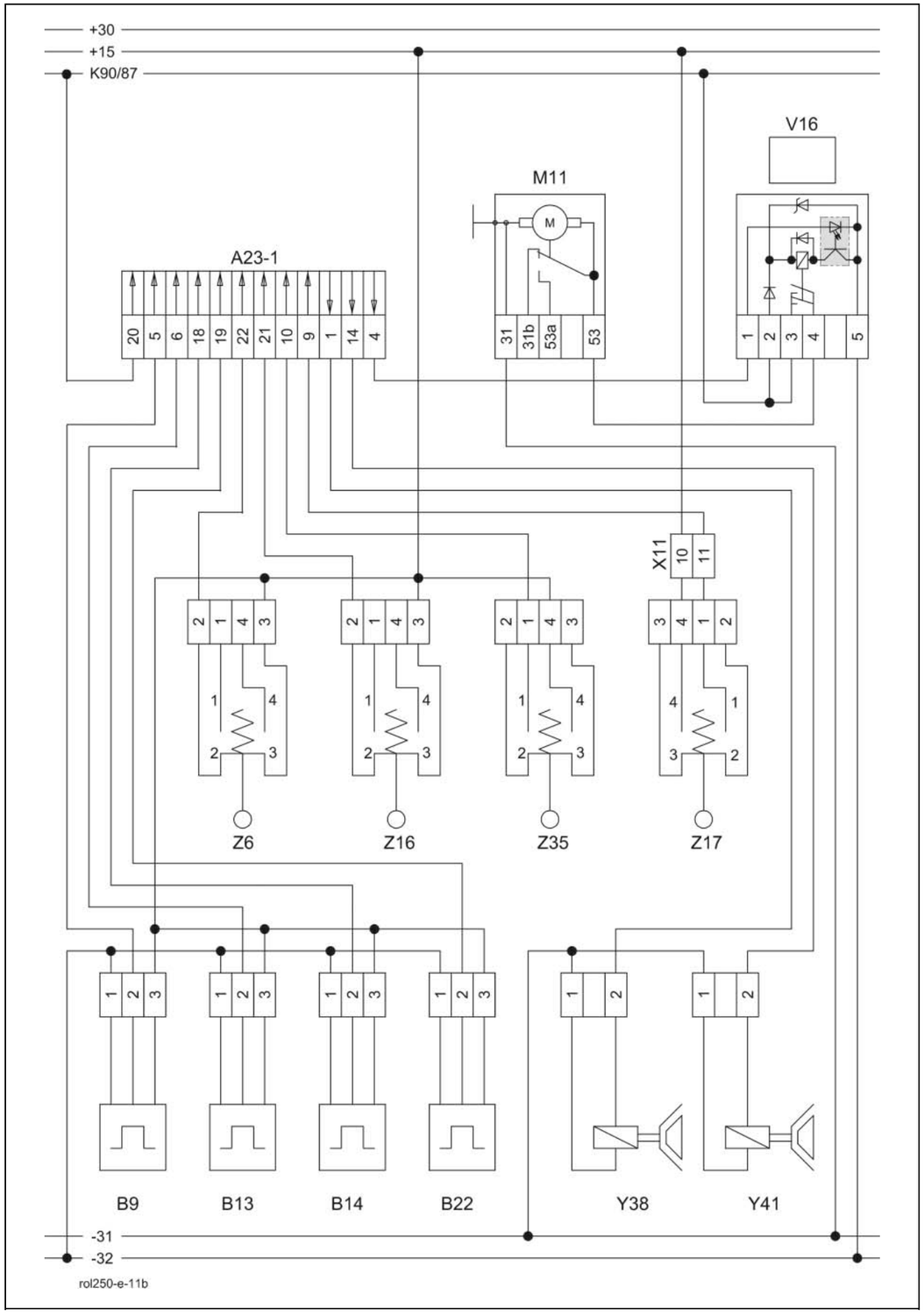
11b

Wrapping release

Rollant 250 Comfort

Rollant 250 Comfort for UNIWRAP

11b - Wrapping release Rollant 250 Comfort / Comfort for UNIWRAP



Key to diagram:

A23-1	ROLLANT 250 module 1	Wiring loom B-part 2
B9	Drive rpm sensor	Wiring loom B-part 3
B13	Twine roll left rpm sensor	Wiring loom B-part 1
B14	Twine roll right rpm sensor	Wiring loom B-part 1
B22	Net roll rpm sensor	Wiring loom B-part 3
M11	Net cutter motor	Wiring loom B-part 3
V16	Amplifier (Net cutter motor)	Wiring loom B-part 2
X11	Connector	Wiring loom B-part 2
Y38	Twine coupling solenoid coil	Wiring loom B-part 3
Y41	Net coupling solenoid coil	Wiring loom B-part 2
Z6	Bale ejector actual value switch	Wiring loom B-part 2
Z16	Tailgate closed actual value switch	Wiring loom B-part 2
Z17	Tailgate open actual value switch	Wiring loom B-part 2
Z35	Cam track actual value switch	Wiring loom B-part 1

Measured value table:

Item	Component	Measured value	Note
B9 B13 B14 B22	Sensor	I – O	Switching earth

Description of function: 1/2

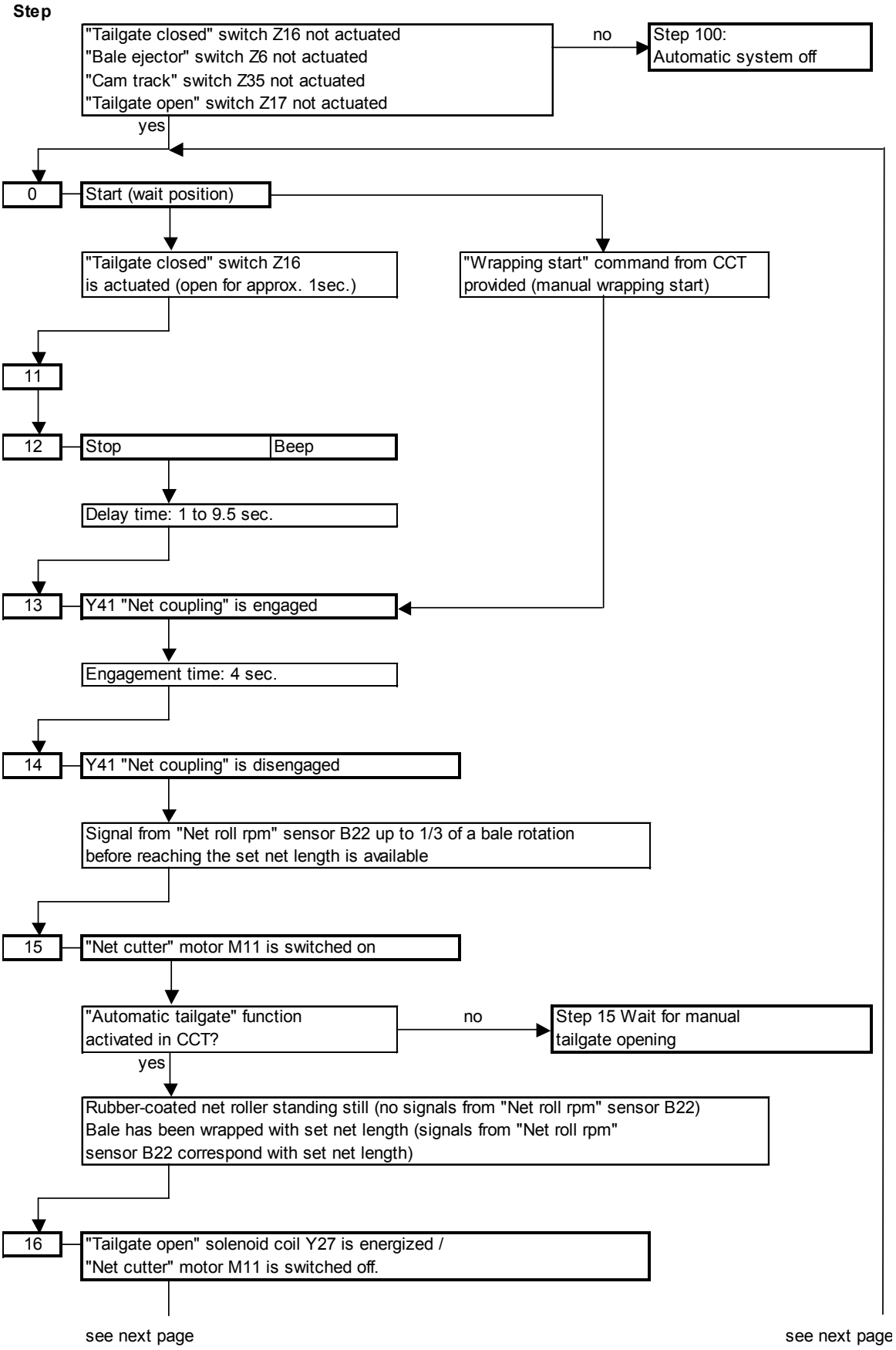
Operational readiness	The machine is ready for automatic wrapping when this is displayed in terminal A30. When the machine is not ready, main menu 1 / 2 shows a 100 as program step and the corresponding fault symbol.
Selection of wrapping type	The wrapping type (net / twine) is pre-selected at terminal A 30.
Automatic wrapping release	A completely filled bale chamber makes the baler reach the pre-set hydraulic baling pressure. The tailgate is pushed open by approx. 5 cm. The filled bale chamber and the Stop symbol are displayed in terminal A 30. The wrapping process is started automatically.
Early wrapping release	When actuating the wrapping release key on terminal A 30, the start of the wrapping process may be released early.
Wrapping process delay	When pressing and holding the wrapping release key on terminal A 30, the start of the wrapping process may be delayed. The wrapping process will start automatically only after the wrapping release key on terminal A 30 has been released.
Setting the net wraps	The desired number of net wraps is set in terminal A 30, menu 2/1. Module A23-1 monitors the net wrapping process with the drive rpm sensor B9 and the net roll rpm sensor B22. (see net wrapping sequence diagram).
Setting the twine wraps	The desired number of twine wraps is set in terminal A 30, menu 2 / 2. Module A23-1 monitors the twine wrapping with the drive rpm sensor B9, the Twine roll left rpm sensor B13 and the Twine roll right rpm sensor B14. (see twine wrapping sequence diagram).
Automatic tailgate operation	Automatic opening and closing of the tailgate after a successfuly completed wrapping may be activated in terminal A 30. The automatic function is monitored by the Tailgate closed actual value switch Z16, Tailgate open switch Z17 and bale ejector switch Z6.
Note:	For cabling of the corresponding solenoid valves see circuit diagram 12a.

Description of function: 2/2

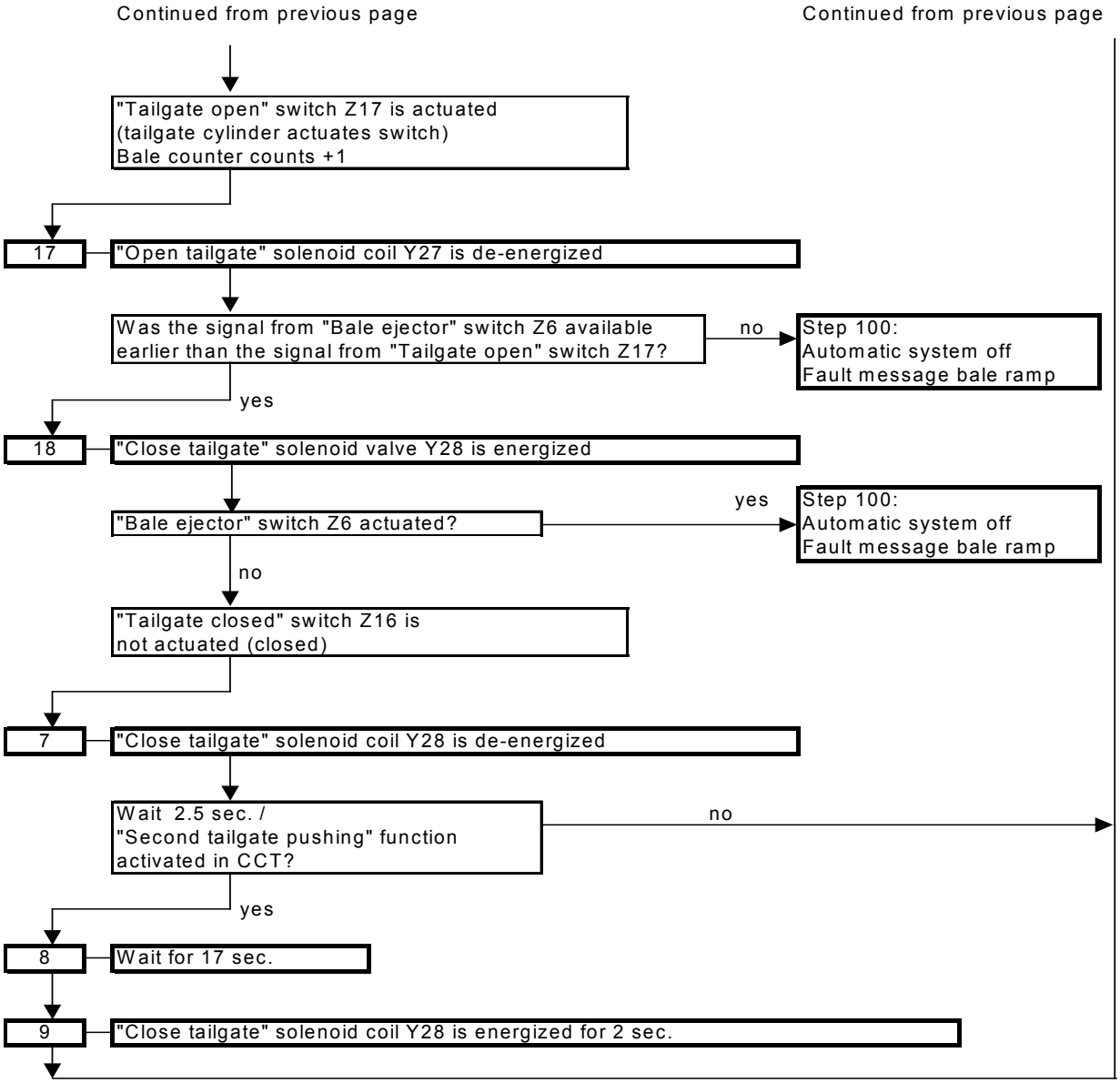
Sensor settings
(see also "Diagnosis" chapter)

- HALL sensor (B9, B13, B14, B22)	The signal change (O-I) is displayed in service menu 8/1 of terminal A30. When there is no signal change, the clearance of the sensors must be corrected.
- Bale ejector actual value switch Z6	Set the switch so that it can be pushed 5 mm max. The signal change (O-I) is displayed in service menu 8/1 of terminal A30.
- Tailgate closed actual value switch Z16	Open the tailgate to 30 ± 5 mm. The gap at the elevation of the centre of rotation of roller no. 5 shall serve as measuring point. Adjust the adjusting screw on the tailgate so that the switch changes its signal at this position and that wrapping is started. The signal change (O-I) is displayed in service menu 8/1 of terminal A30. Adjust the mechanical limit so that the switch can be pushed 5 mm max.
- Tailgate open actual value switch Z17	Set the switch so that it can be pushed 5 mm max. (functional check - see sequence diagram). The signal change (O-I) is displayed in service menu 8/1 of terminal A30.
- Cam track actual value switch Z35	Set the switch so that it can be pushed 5 mm max. (functional check - see sequence diagram). The signal change (O-I) is displayed in service menu 8/1 of terminal A30.

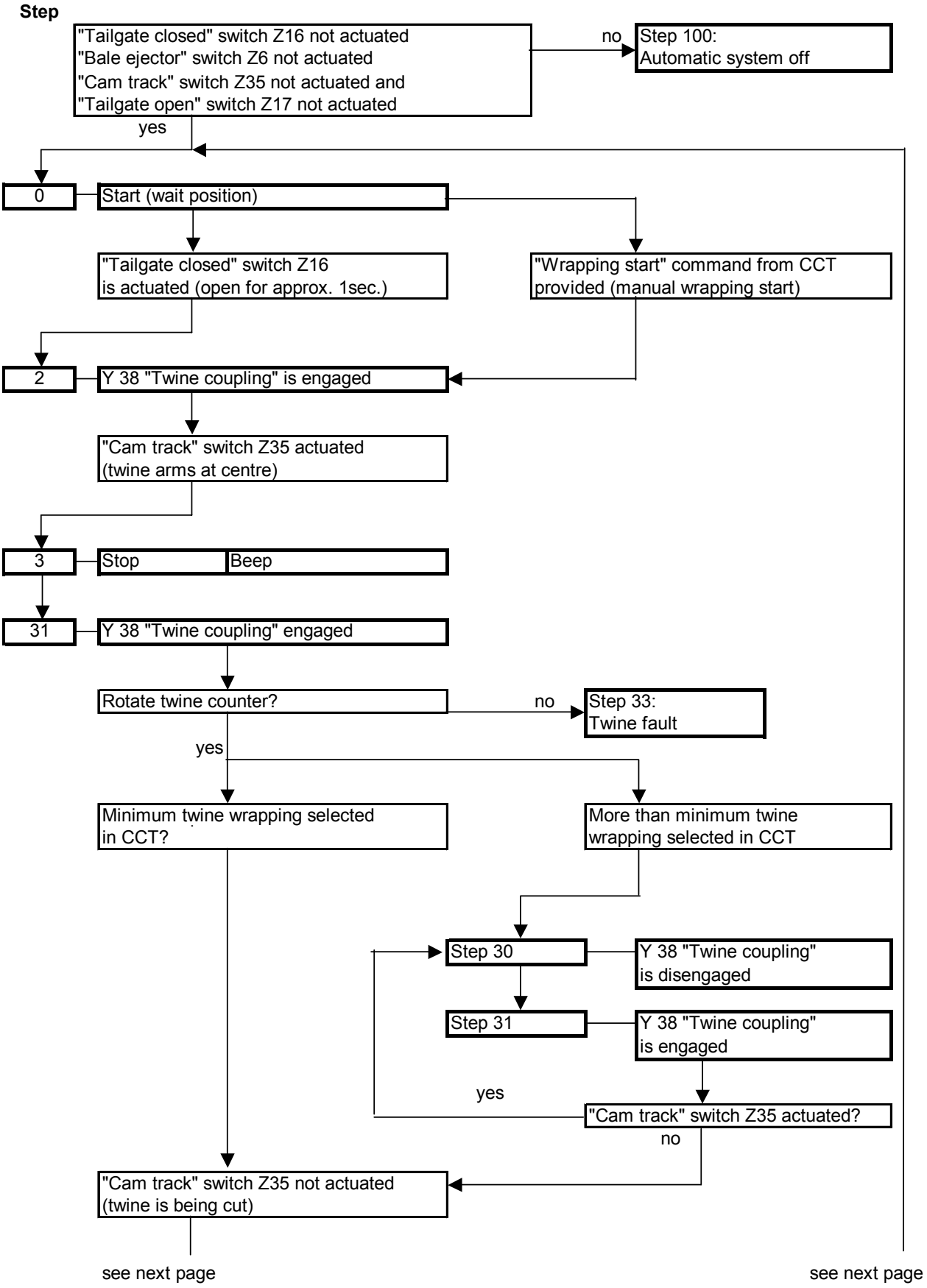
Net wrapping sequence diagram: 1/2



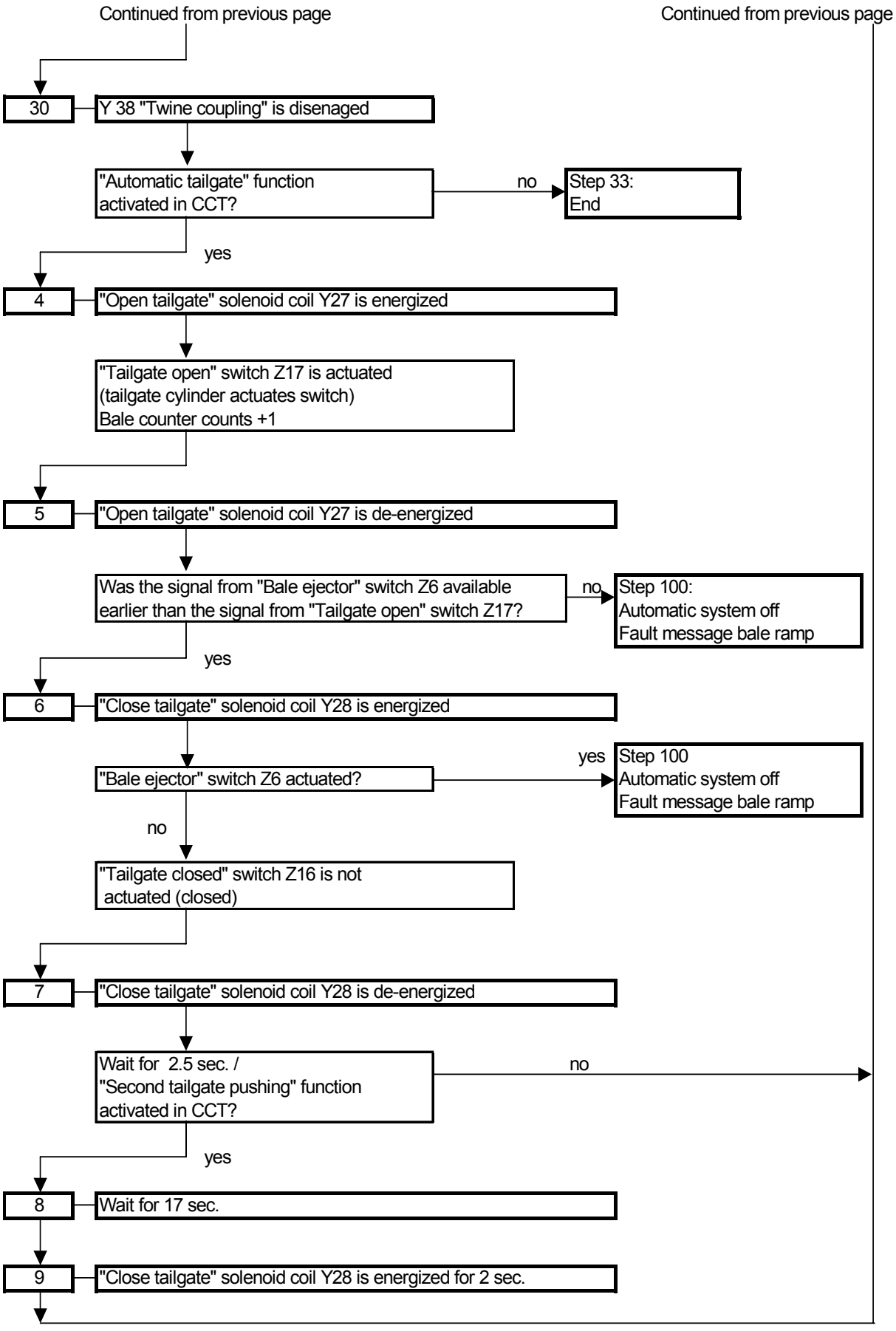
Net wrapping sequence diagram: 2/2



Twine wrapping sequence diagram: 1/2

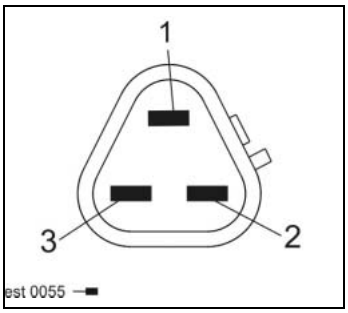


Twine wrapping sequence diagram: 2/2

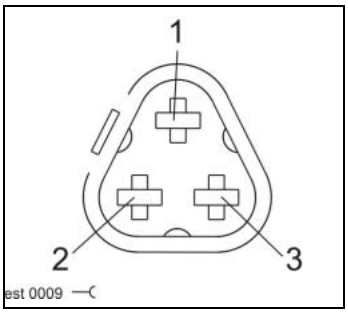


Connector pin definition

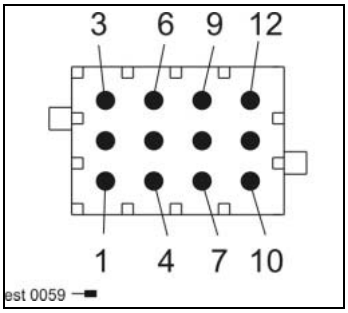
Connector B9/ 13/ 14/ 22



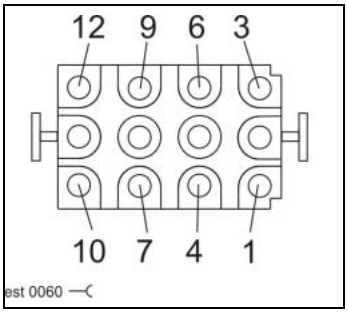
Socket B9/ 13/ 14/ 22



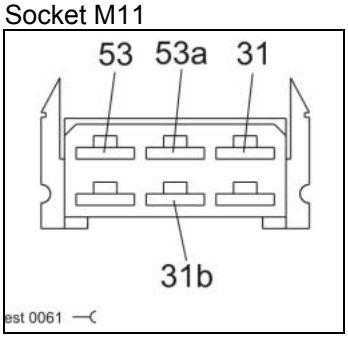
Connector X11



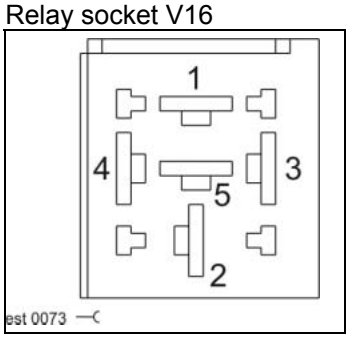
Socket X11



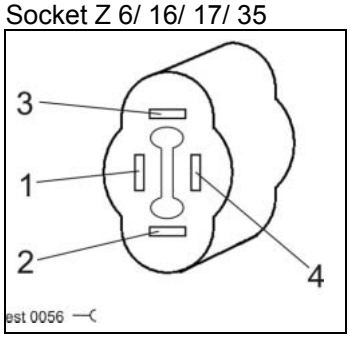
Socket M11



Relay socket V16



Socket Z 6/ 16/ 17/ 35



Connector pin definition

Connector	mm²	Colour
B 9-1	0.5	br-rd
B 9-2	0.5	br-ye
B 9-3	0.5	bk-rd
B13-1	0.5	br-rd
B13-2	0.5	br-gr
B13-3	0.5	bk-rd
B14-1	0.5	br-rd
B14-2	0.5	br-bl
B14-3	0.5	bk-rd
B22-1	0.5	br-rd
B22-2	0.5	bl
B22-3	0.5	bk-rd
M11-31	0.75	br
M11-53	1.5	gr-rd
V16-1	0.5	bk-bl
V16-2	1.5	bk-wt
V16-3	1.5	bk-wt
V16-4	1.5	gr-rd
V16-5	0.5	br-rd
X11-10	0.5	bk-rd
X11-11	0.5	bl-wt
Y38-1	0.75	br
Y38-2	0.75	gr-bl
Y41-1	0.75	br
Y41-2	0.75	gr-ye
Z 6-2	0.5	vi-ye
Z 6-3	0.5	bk-rd
Z16-2	0.5	rd-bk
Z16-3	0.5	bk-rd
Z17-1	0.5	bl-wt
Z17-4	0.5	bk-rd
Z35-1	0.5	wt
Z35-4	0.5	bk-rd

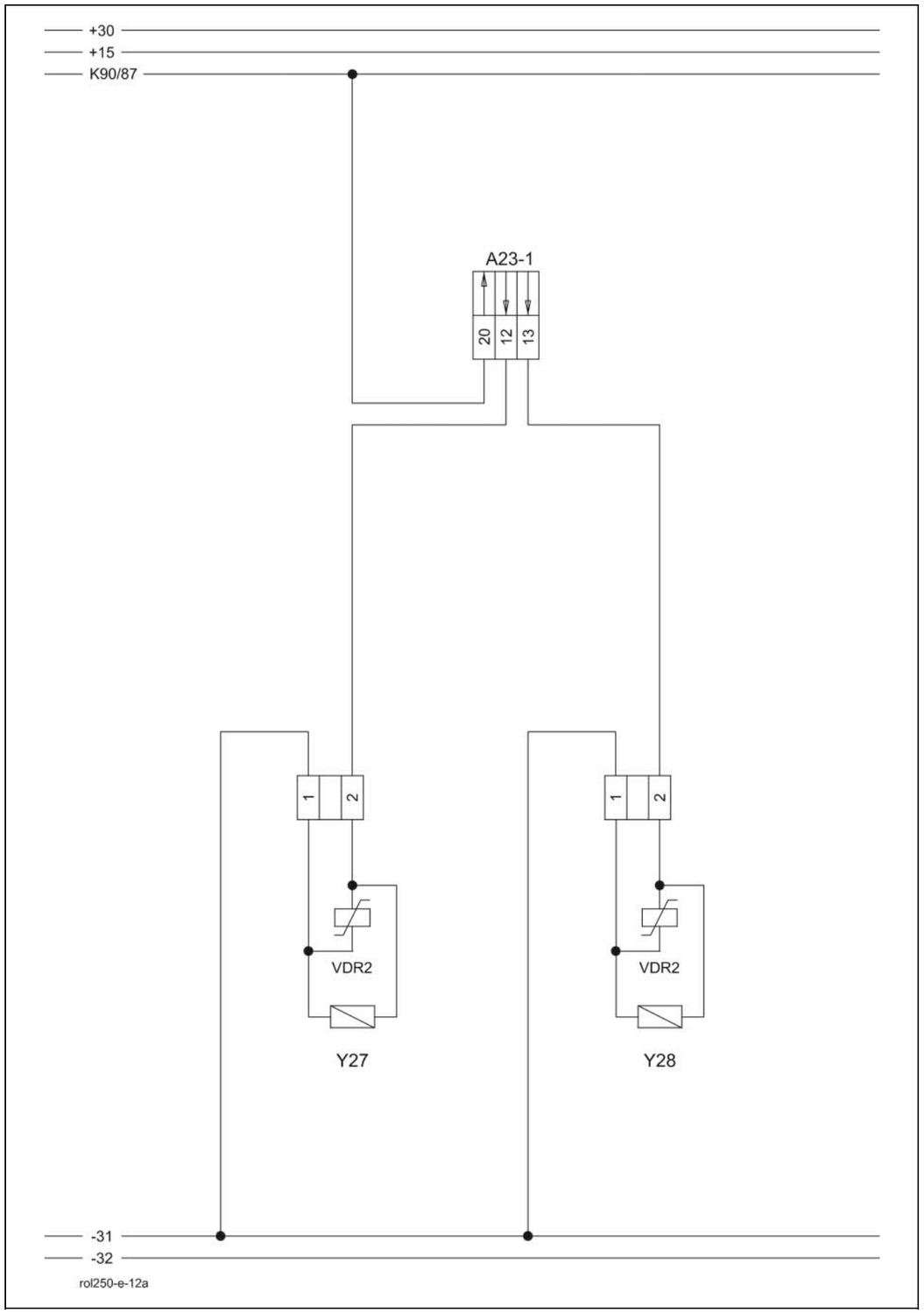
12a

Open / close tailgate

Rollant 250 Comfort

Rollant 250 Comfort for UNIWRAP

12a - Open / close tailgate Rollant 250 Comfort / Comfort for UNIWRAP



Key to diagram:

A23-1	ROLLANT 250 module 1	Wiring loom B - part 2
VDR2	Varistor	not shown
Y27	Open tailgate solenoid coil	Wiring loom B - part 2
Y28	Close tailgate solenoid coil	Wiring loom B - part 2

Measured value table:

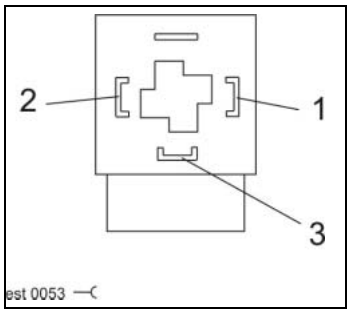
Item	Component	Measured value	Note
Y27 Y28	Solenoid coil	2.72 A; 4.5 Ω	

Description of function:

Open/close tailgate	Module A23 –1 actuates the solenoid valves Open tailgate Y27 and Close tailgate Y28 according to either the operation via terminal A 30 or the wrapping program with automatic tailgate operation. Circulation shut-off valve Y77 is actuated in parallel with the solenoid coils Open tailgate Y27 and Close tailgate Y28 because these functions require pressure build-up within the system.
Note:	For the function of the sensors for automatic tailgate operation please refer to circuit diagrams 11b.

Connector pin definition

Socket Y27/ 28



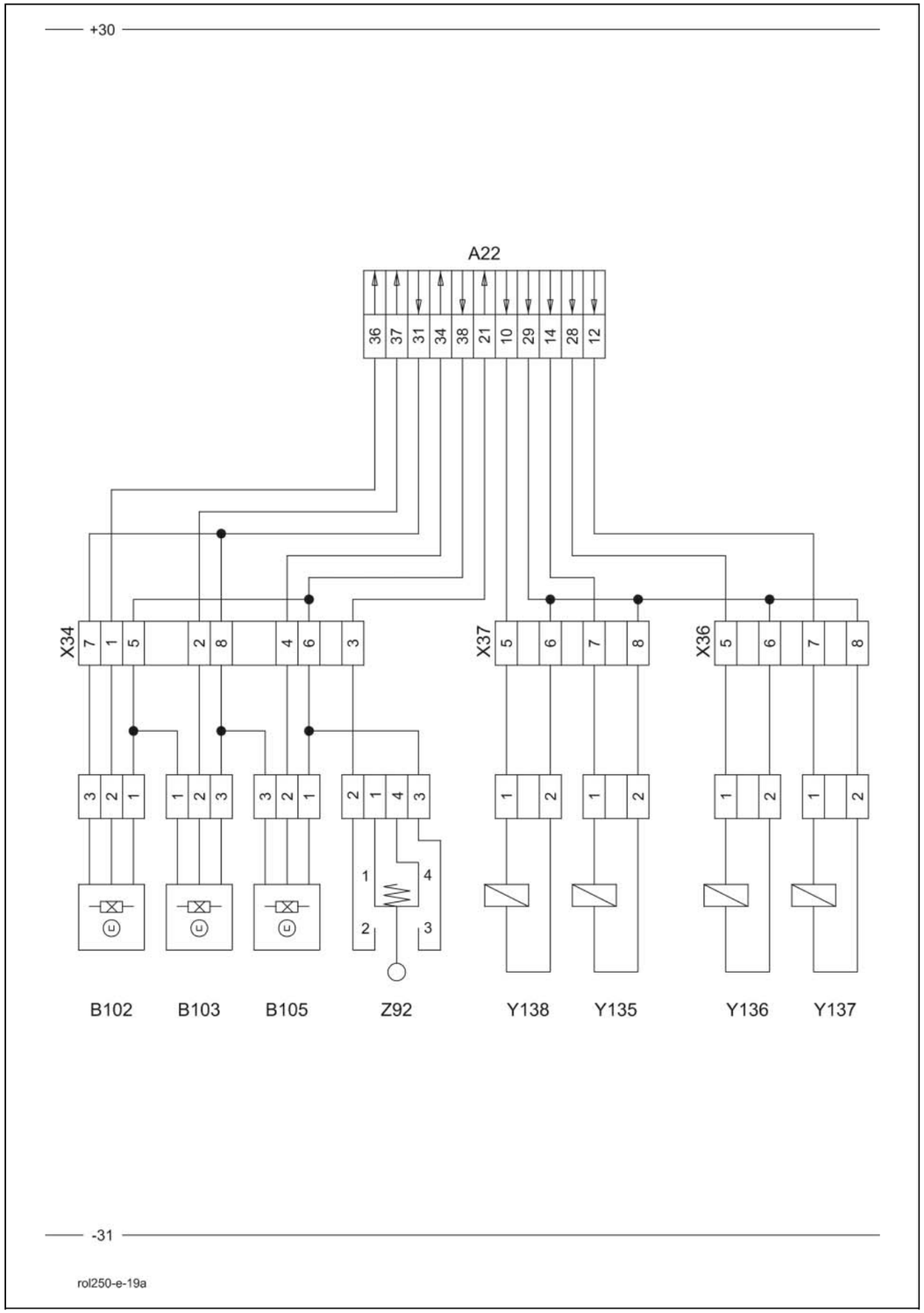
Connector	mm²	Colour
Y27 - 1	0.75	br
Y27 - 2	0.75	bk-rd-wt
Y28 - 1	0.75	br
Y28 - 2	0.75	wt-gn

19a

Load / unload bale

UNIWRAP

19a - Load / unload bale UNIWRAP



Key to diagram:

A22	Bale wrapper module	E-10
B102	Bale in tipping cradle sensor	Wiring loom L
B103	Tipping cradle down sensor	Wiring loom L
B105	Wrapping table up sensor	Wiring loom L
X34	Connector	Wiring loom L
X36	Connector	Wiring loom K
X37	Connector	Wiring loom K
Y135	Lower tipping cradle solenoid coil	Wiring loom K
Y136	Raise tipping cradle solenoid coil	Wiring loom K
Y137	Lower wrapping table solenoid coil	Wiring loom K
Y138	Raise wrapping table solenoid coil	Wiring loom K
Z92	Bale on wrapping table actual value switch	Wiring loom L

Measured value table:

Item	Component	Measured value	Note
B102	Sensor	I – O	Switching earth
B103			
B105			
Y135	Solenoid coil	1.9 A; 6.4 Ω	
Y136			
Y137			
Y138			

Description of function:

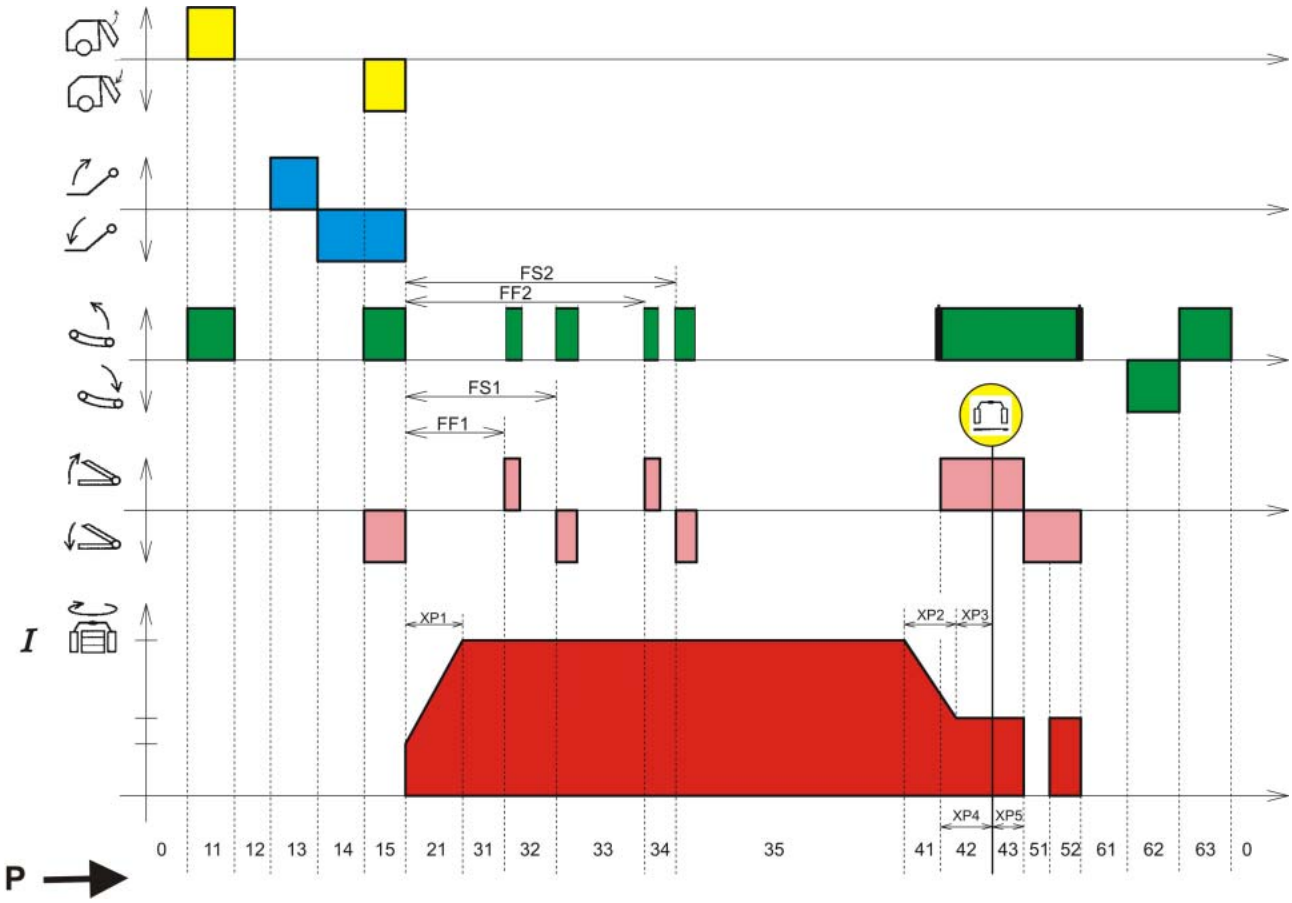
Bale transfer	After opening the tailgate, the bale rolls into the tipping cradle.
Bale in tipping cradle	The Bale in tipping cradle sensor B102 detects that the bale is in the tipping cradle (magnet in front of sensor). If the bale has not been detected in the tipping cradle 1.5 seconds after tailgate opening, the “Err : Bale bench” message is displayed in terminal A30-1 and the automatic sequence is interrupted.
Tipping cradle transports bale on wrapping table	After the bale has been detected in the tipping cradle, the Raise tipping cradle solenoid coil Y138 is actuated. Detection of the Tailgate open switch Z17 is a pre-condition for this. If this pre-condition is not met, the “Err : Tailgate” message is displayed in terminal A30-1 and the automatic sequence is interrupted.
Bale on wrapping table	When the bale is on the wrapping table, the Bale on wrapping table switch Z92 is actuated. The bale must have been detected on the wrapping table 1.5 seconds after actuation of the Raise tipping cradle solenoid coil Y138. Otherwise the “Err : Bale table” message is displayed in terminal A30-1 and the automatic sequence is interrupted.
Lower tipping cradle	After transferring the bale to the wrapping table, the Lower tipping cradle solenoid coil Y135 is actuated. Detection of the Tailgate open switch Z17 is a pre-condition for this. If this pre-condition is not met, the “Err : Tailgate” is displayed in terminal A30-1 and the automatic sequence is interrupted.
Tipping cradle down Close tailgate	After the first of 3 magnets has been detected by the Tipping cradle down sensor B103, the tailgate closes. Manual tailgate closing also requires that the Tipping cradle down sensor B103 be detected. Otherwise, the “Err : Tailgate” message will appear in terminal A30-1 and the tailgate cannot be closed.
Wrapping table up	The wrapping table at top sensor B105 detects if the wrapping table is in its top position (solenoid in front of sensor). Otherwise the “Err : Wrapping table” message is displaye din terminal A30-1 and the automatic sequence is interrupted.

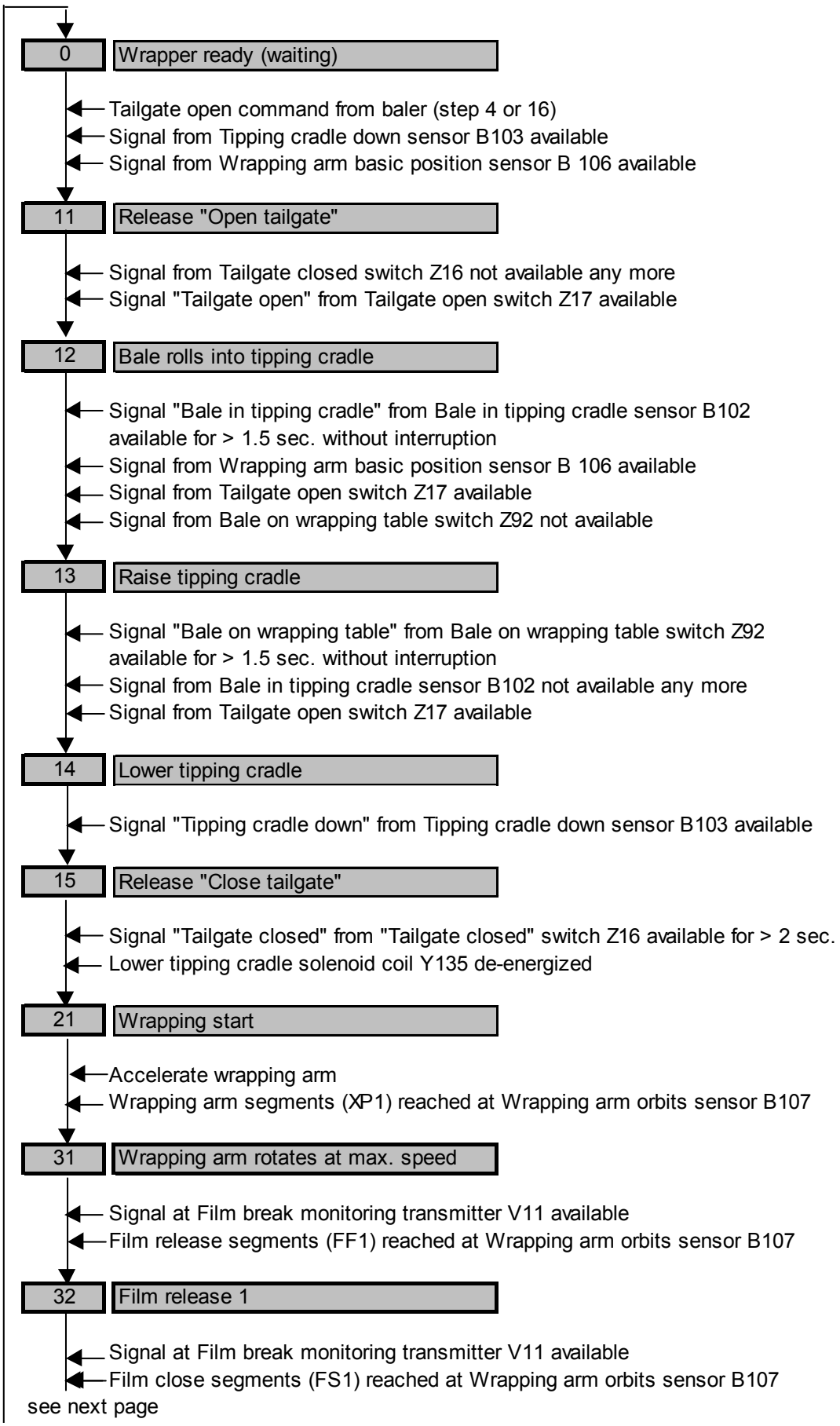
Sensor settings

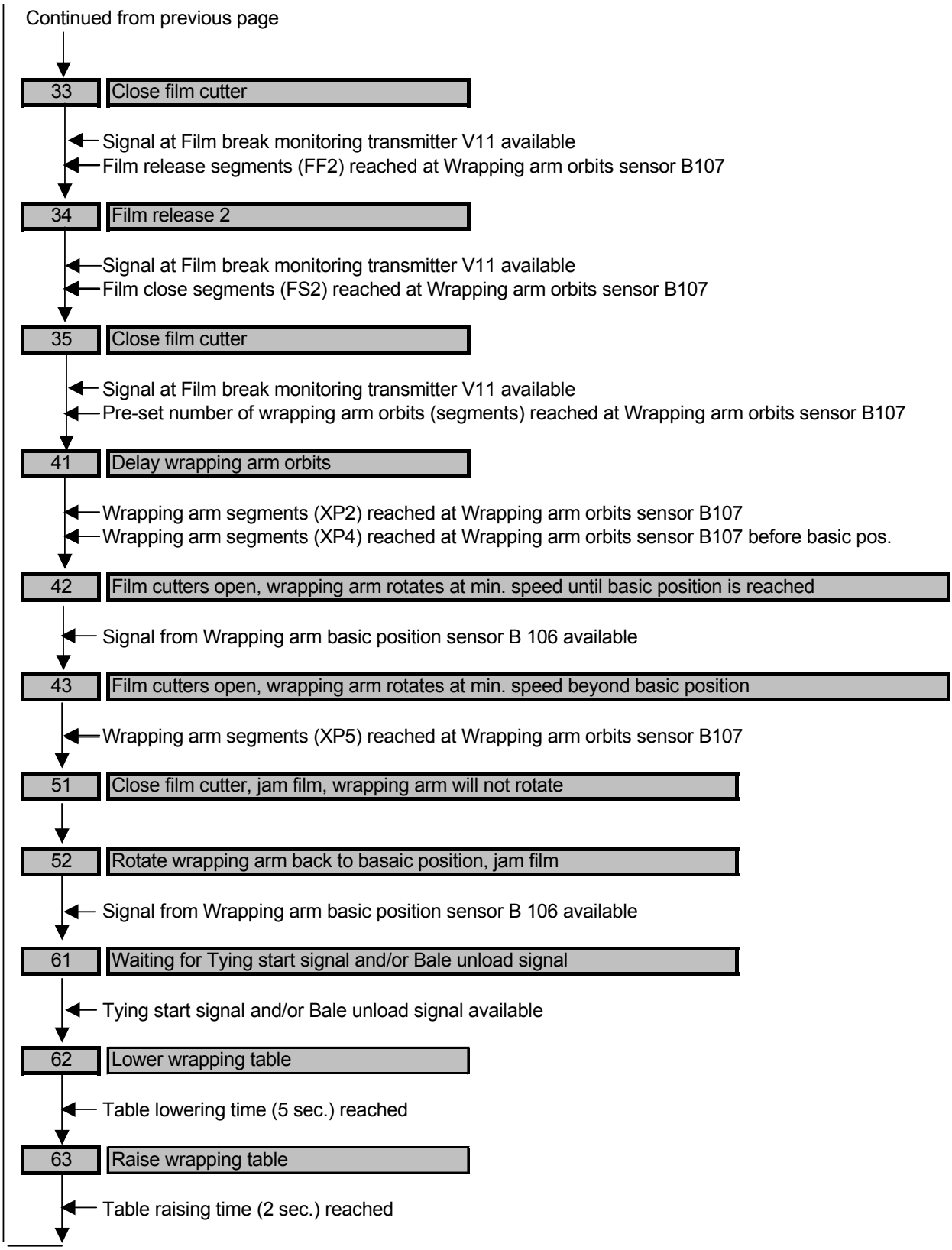
- HALL sensor (B102, B103, B105)	The sensors B102, B103, B105 should be set to a clearance of 6 - 7 mm from the magnet upon detecting the signal (magnet in front of sensor = 0 → I, see Wiring loom L).
- Bale on wrapping table actual value switch Z92	The Bale on wrapping table switch Z92 should change its signal after a mechanical actuation from approx. 6.5 - 9.5 mm (0 → I) (see also "Sensor test" chapter in Operator's Manual).

Wrapping sequence diagram:

The program steps (P) are displayed in menu 5/… of terminal A30 during the wrapping process.

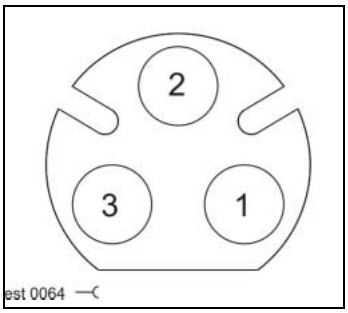



0
Wrapper ready (waiting)
Tailgate open command from baler (step 4 or 16)
Signal from Tipping cradle down sensor B103 available
Signal from Wrapping arm basic position sensor B 106 available
11
Release "Open tailgate"
Signal from Tailgate closed switch Z16 not available any more
Signal "Tailgate open" from Tailgate open switch Z17 available
12
Bale rolls into tipping cradle
Signal "Bale in tipping cradle" from Bale in tipping cradle sensor B102 available for > 1.5 sec. without interruption
Signal from Wrapping arm basic position sensor B 106 available
Signal from Tailgate open switch Z17 available
Signal from Bale on wrapping table switch Z92 not available
13
Raise tipping cradle
Signal "Bale on wrapping table" from Bale on wrapping table switch Z92 available for > 1.5 sec. without interruption
Signal from Bale in tipping cradle sensor B102 not available any more
Signal from Tailgate open switch Z17 available
14
Lower tipping cradle
Signal "Tipping cradle down" from Tipping cradle down sensor B103 available
15
Release "Close tailgate"
Signal "Tailgate closed" from "Tailgate closed" switch Z16 available for > 2 sec.
Lower tipping cradle solenoid coil Y135 de-energized
21
Wrapping start
Accelerate wrapping arm
Wrapping arm segments (XP1) reached at Wrapping arm orbits sensor B107
31
Wrapping arm rotates at max. speed
Signal at Film break monitoring transmitter V11 available
Film release segments (FF1) reached at Wrapping arm orbits sensor B107
32
Film release 1
Signal at Film break monitoring transmitter V11 available
Film close segments (FS1) reached at Wrapping arm orbits sensor B107
see next page

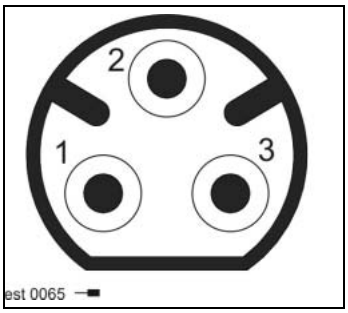

Continued from previous page
33
Close film cutter
Signal at Film break monitoring transmitter V11 available
Film release segments (FF2) reached at Wrapping arm orbits sensor B107
34
Film release 2
Signal at Film break monitoring transmitter V11 available
Film close segments (FS2) reached at Wrapping arm orbits sensor B107
35
Close film cutter
Signal at Film break monitoring transmitter V11 available
Pre-set number of wrapping arm orbits (segments) reached at Wrapping arm orbits sensor B107
41
Delay wrapping arm orbits
Wrapping arm segments (XP2) reached at Wrapping arm orbits sensor B107
Wrapping arm segments (XP4) reached at Wrapping arm orbits sensor B107 before basic pos.
42
Film cutters open, wrapping arm rotates at min. speed until basic position is reached
Signal from Wrapping arm basic position sensor B 106 available
43
Film cutters open, wrapping arm rotates at min. speed beyond basic position
Wrapping arm segments (XP5) reached at Wrapping arm orbits sensor B107
51
Close film cutter, jam film, wrapping arm will not rotate
52
Rotate wrapping arm back to basaic position, jam film
Signal from Wrapping arm basic position sensor B 106 available
61
Waiting for Tying start signal and/or Bale unload signal
Tying start signal and/or Bale unload signal available
62
Lower wrapping table
Table lowering time (5 sec.) reached
63
Raise wrapping table
Table raising time (2 sec.) reached

Connector pin definition

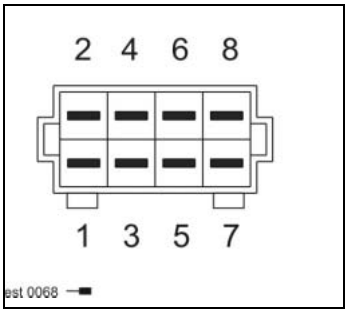
Socket B102/ 103/ 105



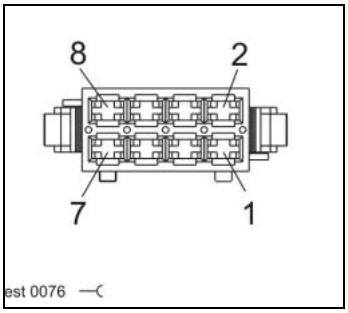
Connector B102/ 103/ 105



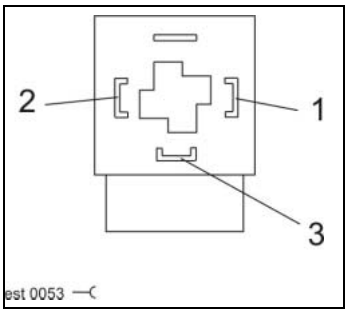
Connector X34/ X36/ X37



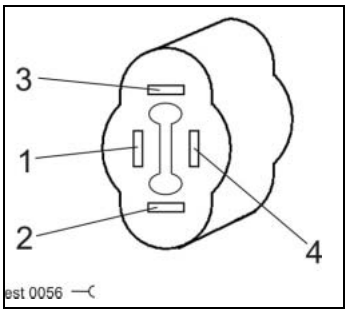
Socket X34/ X36/ X37



Socket
Y135/ 136/ Y137/ 138



Socket Z92



Connector pin definition

Connector	mm²	Colour
B102-1	1.0	wt
B102-2	1.0	vi
B102-3	1.0	rd
B103-1	1.0	wt-bk
B103-2	1.0	or
B103-3	1.0	rd-bk
B105-1	1.0	wt-gn
B105-2	1.0	ye-rd
B105-3	1.0	rd-gn
X34-1	1.0	vi
X34-2	1.0	or
X34-3	1.0	rs
X34-4	1.0	ye-rd
X34-5	1.0	wt/ wt-bk
X34-6	1.0	wt-gn/ wt-rd
X34-7	1.0	rd
X34-8	1.0	rd-bk/ rd-gn
X36-5	1.0	br
X36-6	1.0	bl
X36-7	1.0	br
X36-8	1.0	bl
X37-5	1.0	br
X37-6	1.0	bl
X37-7	1.0	br
X37-8	1.0	bl
Y135-1	1.0	br
Y135-2	1.0	bl
Y136-1	1.0	br
Y136-2	1.0	bl
Y137-1	1.0	br
Y137-2	1.0	bl
Y138-1	1.0	br
Y138-2	1.0	bl
Z92-2	1.0	pi
Z92-3	1.0	wt-rd

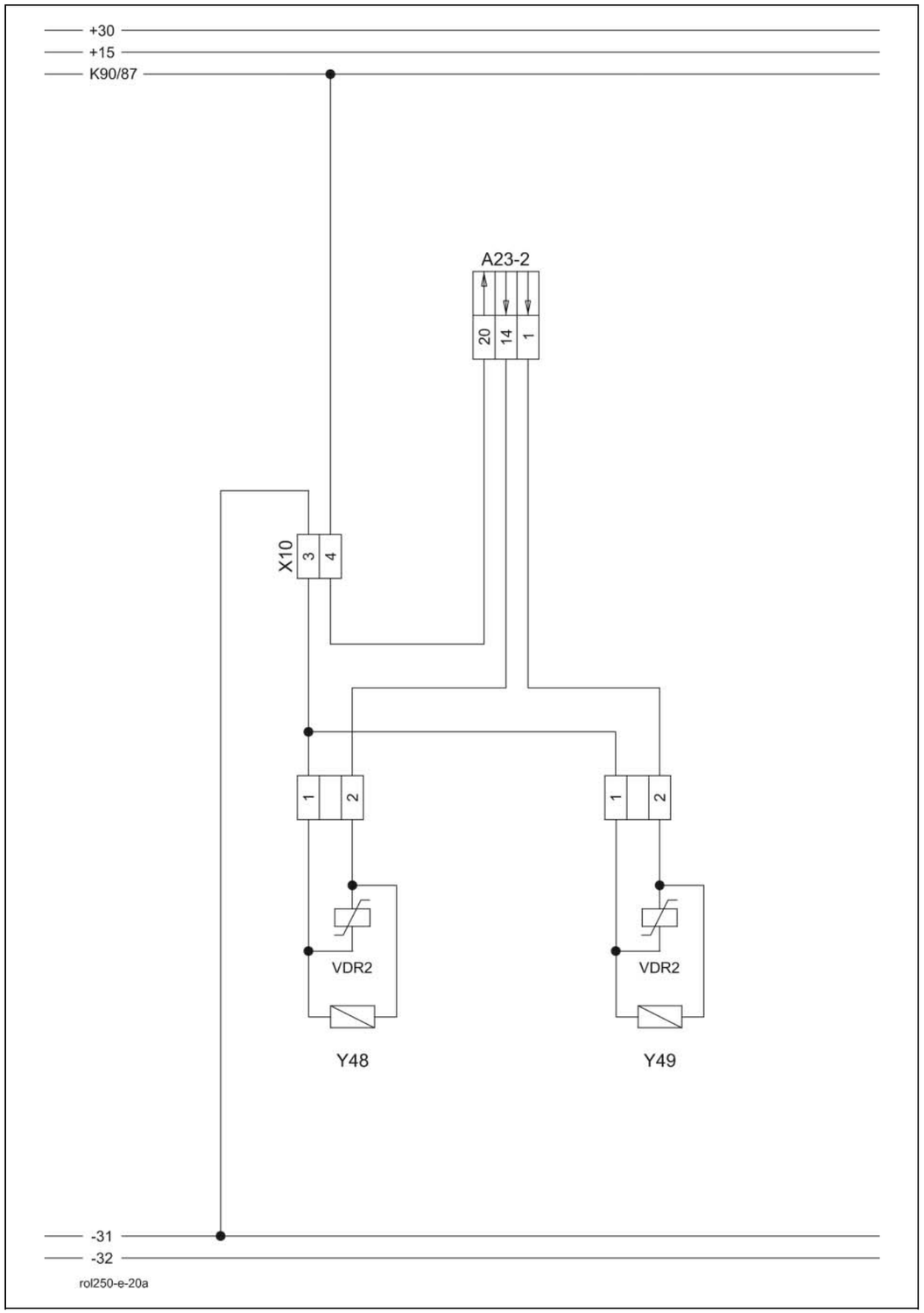
20a

Raise / lower pick-up

Rollant 250 Comfort

Rollant 250 Comfort for UNIWRAP

20a - Raise / lower pick-up - Rollant 250 Comfort / Comfort for UNIWRAP



Key to diagram:

A23-2	ROLLANT 250 module 2	Wiring loom B - part 2
VDR2	Varistor	not shown
X10	Connector	Wiring loom B - part 2 / C
Y48	Raise pick-up solenoid coil	Wiring loom C / F / H
Y49	Lower pick-up solenoid coil	Wiring loom C / F / H

Measured value table:

Item	Component	Measured value	Note
Y48 Y49	Solenoid coil	3.8 A; 3.2 Ω	

Description of function:

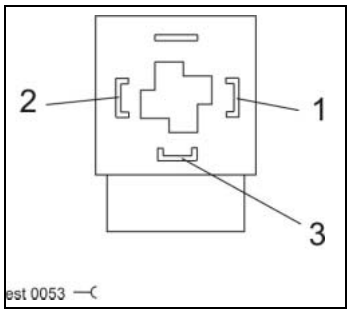
Raise / lower pick-up

According to the operation via the A 30 terminal, the Raise pick-up solenoid coil Y48 and the Lower pick-up solenoid coil Y49 are actuated by module A23 –2.

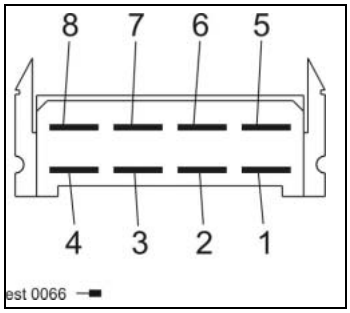
Circulation shut-off valve Y77 is actuated in parallel with the Raise pick-up solenoid coil Y48 since this function requires pressure build-up within the system.

Connector pin definition

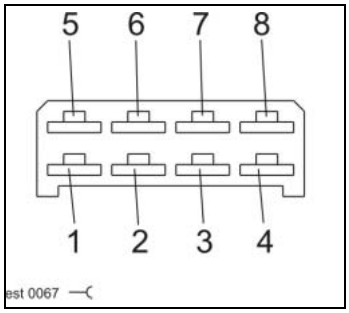
Socket Y 48/ 49



Connector X10



Socket X10



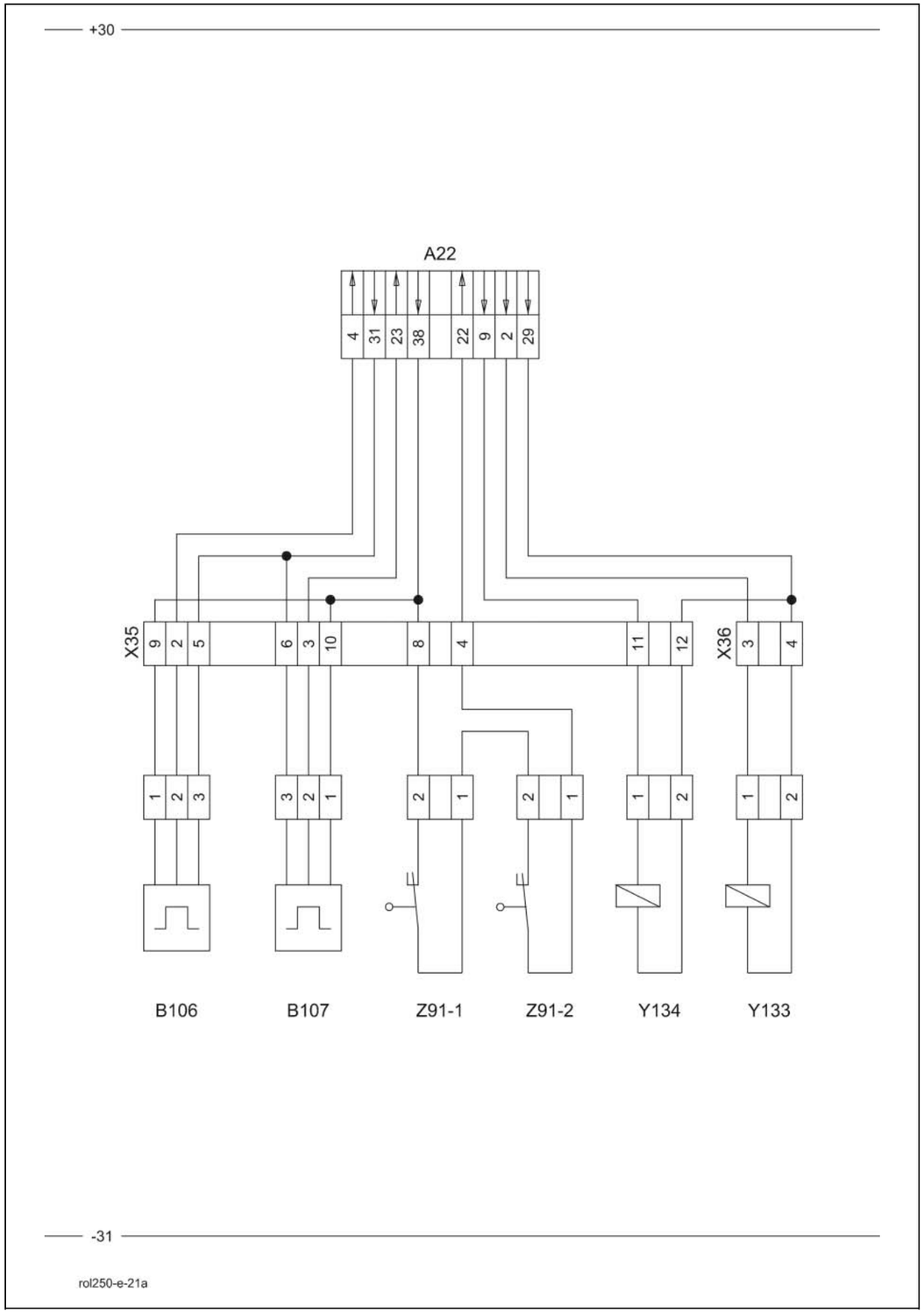
Connector	mm²	Colour
X10 - 3	1.5	br
X10 - 4	1.5	bk-wt
Y48 - 1	0.75	br
Y48 - 2	0.75	wt
Y49 - 1	0.75	br
Y49 - 2	0.75	gr

21a

Wrapping arm rotation

UNIWRAP

21a - Wrapping arm rotation - UNIWRAP



Key to diagram:

A22	Bale wrapper module	ZE
B106	Wrapping arm basic position sensor	Wiring loom M
B107	Wrapping arm orbits sensor	Wiring loom M
X35	Connector	Wiring loom M
X36	Connector	Wiring loom K
Y133	Wrapping arm forward solenoid coil	Wiring loom K
Y134	Wrapping arm backward solenoid coil	Wiring loom M
Z91-1	Safety bow actual value switch	Wiring loom M
Z91-2	Safety bow actual value switch	Wiring loom M

Measured value table:

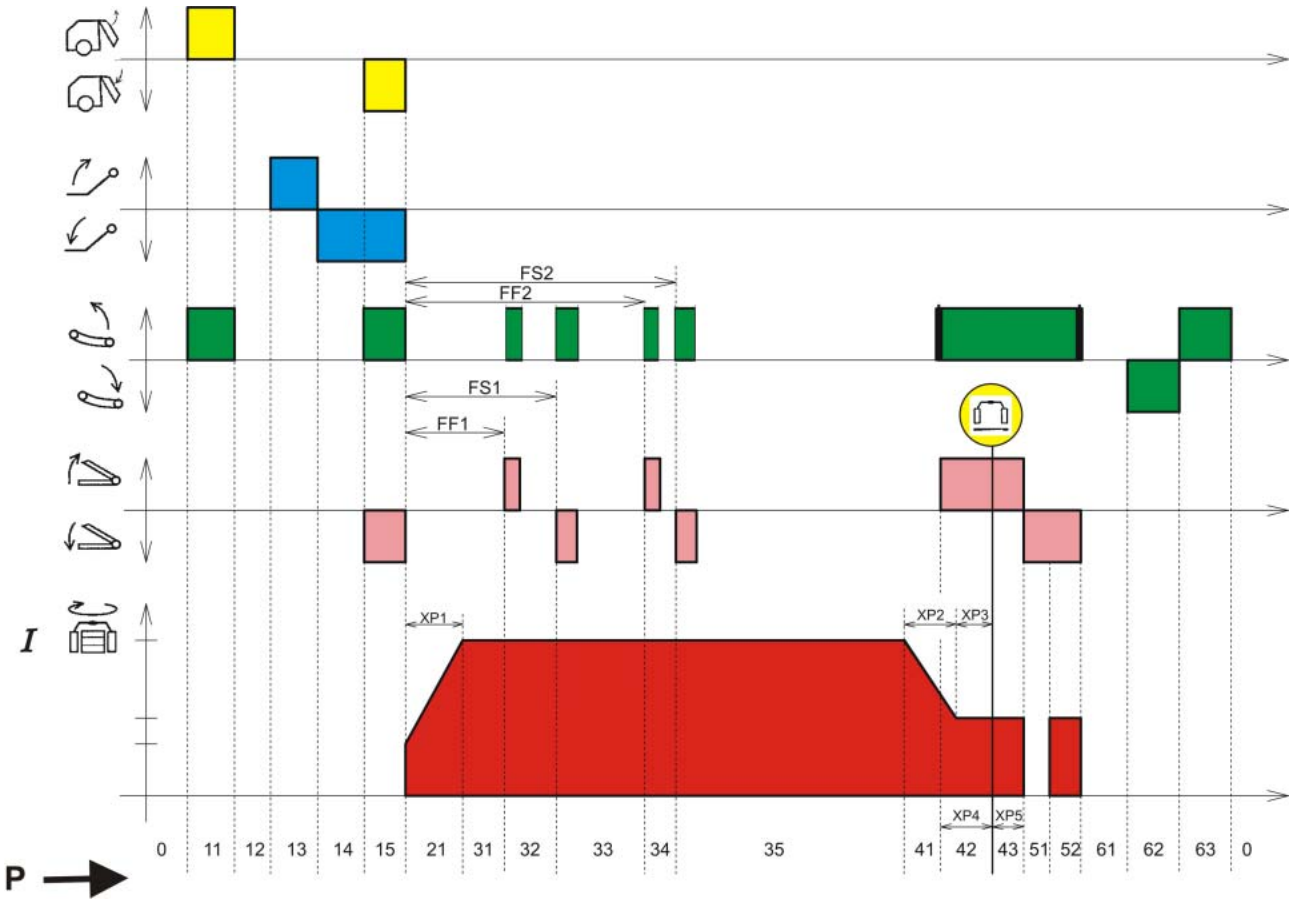
Item	Component	Measured value	Note
B106 B107	Sensor	I – O	Switching earth
Y133 Y134	Solenoid coil Solenoid coil	1.9 A; 6.4 Ω	

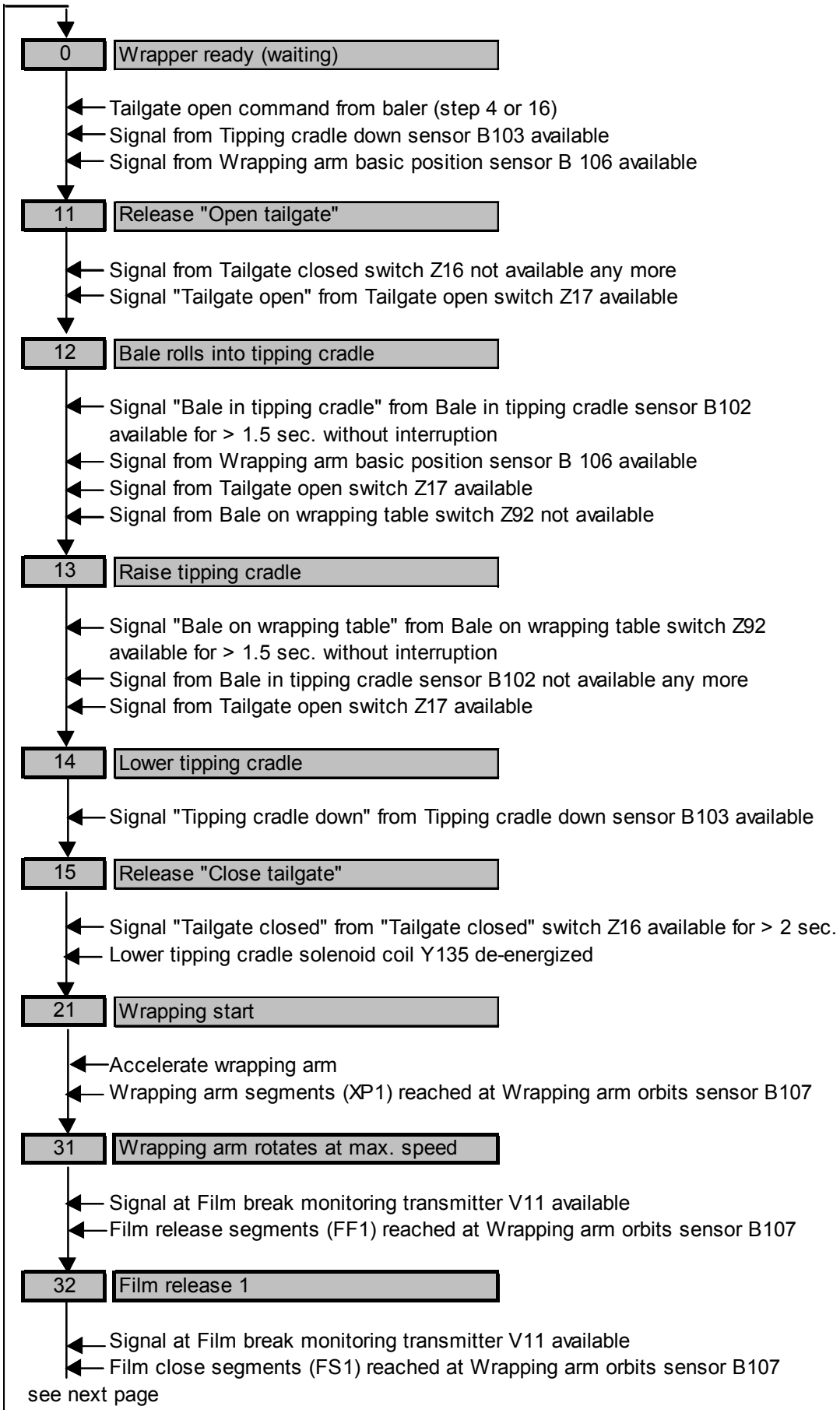
Description of function:

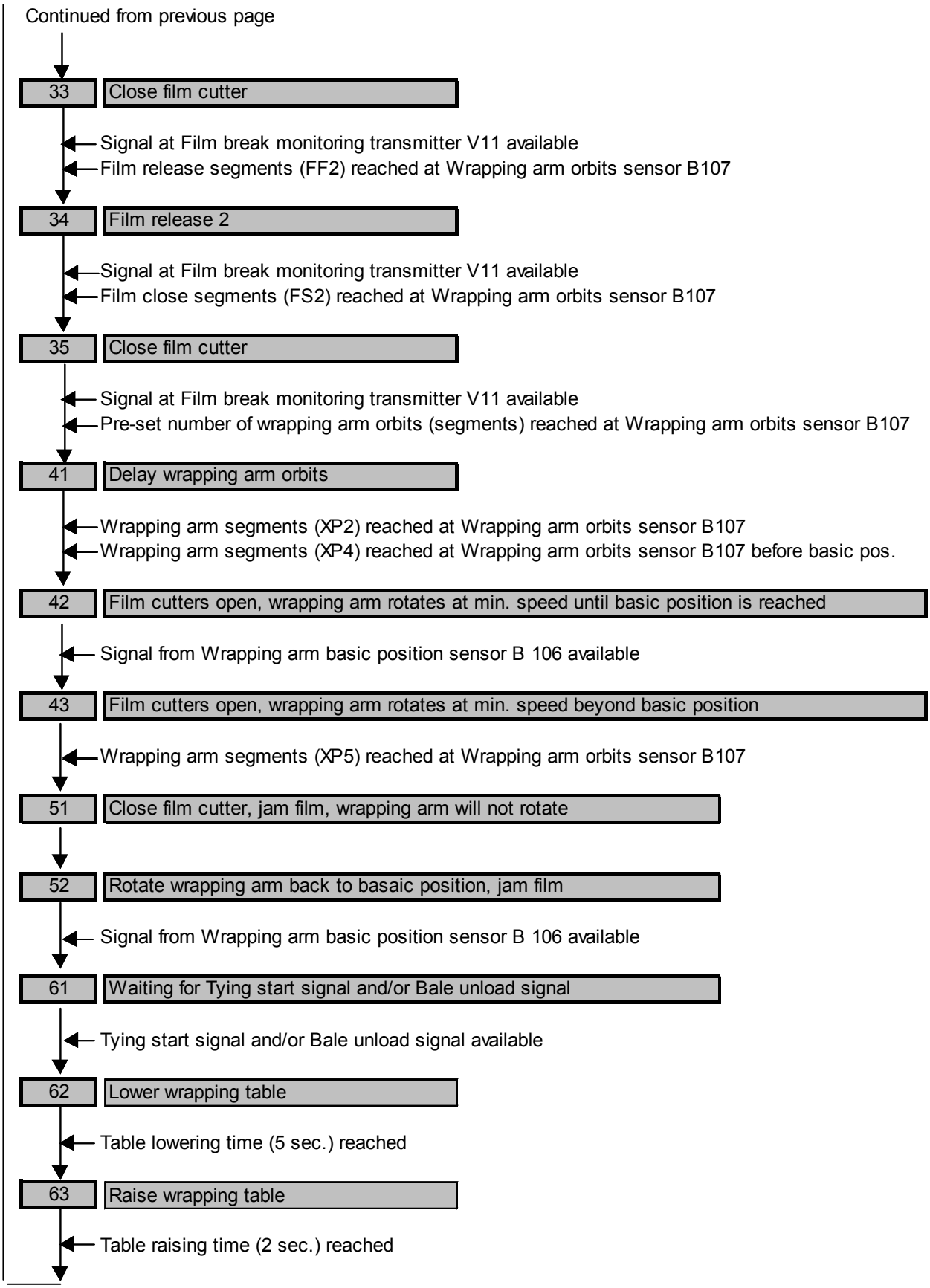
Wrapping arm basic position	The basic position of the wrapping arm is a pre-condition for many automatic processes. The basic position is detected by the Wrapping arm basic position sensor B106 and the Wrapping arm orbits sensor B107. The wrapping arm is in its basic position when the slot of the perforated disk is below the Wrapping arm basic position sensor B106, but the Wrapping arm orbits sensor B107 detects metal (see also Wiring loom M). In this position, the wrapping arm is crosswise to the machine.
Wrapping arm orbits	Module A22 detects the position and the number of orbits of the wrapping arm via Wrapping arm orbits sensor B107.
Rotate wrapping arm	Module A22 actuates the Wrapping arm forward solenoid coil Y133 according to the "Wrapping" program. This is done using pulse-width modulation in order to allow controlled acceleration and deceleration of the wrapping arm.
Rotate wrapping arm backward	To rotate the wrapping arm backward, the Wrapping arm backward solenoid coil Y134 is actuated in addition to Wrapping arm forward solenoid coil Y133.
Emergency stop	When a safety bow switch Z91 or Z91-2 is actuated during rotation of the wrapping arm, module A22 immediately cuts the circuit to the Wrapping arm forward solenoid coil Y133. The wrapping process is interrupted. The Wrapping arm forward solenoid coil Y133 is only actuated again after another manual start signal on terminal A30 or A30-1.
Braking and positioning of wrapping arm	When the Wrapping arm forward solenoid coil Y133 is not actuated, the wrapping arm is decelerated by a multiple disk brake and kept in position by a hydraulic clamping device. (see also "Hydraulic System" chapter).
Setting of safety bow switch	The sensor test allows checking the setting of the safety bow switches Z91-1/Z91-2. When one of the safety bows is moved by approx. 150 mm, the signal should change (I $\rightarrow$ 0). (for further information refer to the respective chapter in the Operator's Manual).
Setting of wrapping arm sensors	The sensors B106/B107 are set to a clearance of 2-3 mm from the perforated disk (see Wiring loom M).

Wrapping sequence diagram:

The program steps (P) are displayed in menu 5/… of terminal A30 during the wrapping process.

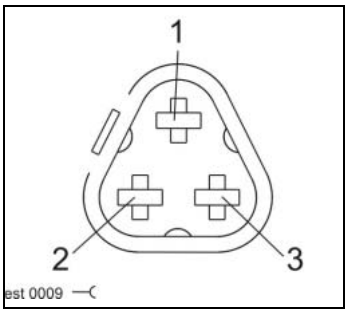



0
Wrapper ready (waiting)
Tailgate open command from baler (step 4 or 16)
Signal from Tipping cradle down sensor B103 available
Signal from Wrapping arm basic position sensor B 106 available
11
Release "Open tailgate"
Signal from Tailgate closed switch Z16 not available any more
Signal "Tailgate open" from Tailgate open switch Z17 available
12
Bale rolls into tipping cradle
Signal "Bale in tipping cradle" from Bale in tipping cradle sensor B102 available for > 1.5 sec. without interruption
Signal from Wrapping arm basic position sensor B 106 available
Signal from Tailgate open switch Z17 available
Signal from Bale on wrapping table switch Z92 not available
13
Raise tipping cradle
Signal "Bale on wrapping table" from Bale on wrapping table switch Z92 available for > 1.5 sec. without interruption
Signal from Bale in tipping cradle sensor B102 not available any more
Signal from Tailgate open switch Z17 available
14
Lower tipping cradle
Signal "Tipping cradle down" from Tipping cradle down sensor B103 available
15
Release "Close tailgate"
Signal "Tailgate closed" from "Tailgate closed" switch Z16 available for > 2 sec.
Lower tipping cradle solenoid coil Y135 de-energized
21
Wrapping start
Accelerate wrapping arm
Wrapping arm segments (XP1) reached at Wrapping arm orbits sensor B107
31
Wrapping arm rotates at max. speed
Signal at Film break monitoring transmitter V11 available
Film release segments (FF1) reached at Wrapping arm orbits sensor B107
32
Film release 1
Signal at Film break monitoring transmitter V11 available
Film close segments (FS1) reached at Wrapping arm orbits sensor B107
see next page

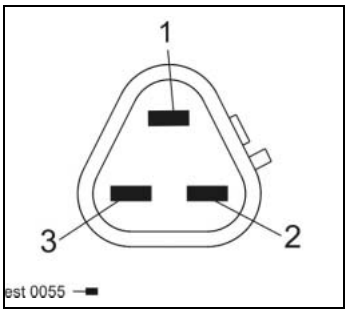

Continued from previous page
33
Close film cutter
Signal at Film break monitoring transmitter V11 available
Film release segments (FF2) reached at Wrapping arm orbits sensor B107
34
Film release 2
Signal at Film break monitoring transmitter V11 available
Film close segments (FS2) reached at Wrapping arm orbits sensor B107
35
Close film cutter
Signal at Film break monitoring transmitter V11 available
Pre-set number of wrapping arm orbits (segments) reached at Wrapping arm orbits sensor B107
41
Delay wrapping arm orbits
Wrapping arm segments (XP2) reached at Wrapping arm orbits sensor B107
Wrapping arm segments (XP4) reached at Wrapping arm orbits sensor B107 before basic pos.
42
Film cutters open, wrapping arm rotates at min. speed until basic position is reached
Signal from Wrapping arm basic position sensor B 106 available
43
Film cutters open, wrapping arm rotates at min. speed beyond basic position
Wrapping arm segments (XP5) reached at Wrapping arm orbits sensor B107
51
Close film cutter, jam film, wrapping arm will not rotate
52
Rotate wrapping arm back to basaic position, jam film
Signal from Wrapping arm basic position sensor B 106 available
61
Waiting for Tying start signal and/or Bale unload signal
Tying start signal and/or Bale unload signal available
62
Lower wrapping table
Table lowering time (5 sec.) reached
63
Raise wrapping table
Table raising time (2 sec.) reached

Connector pin definition

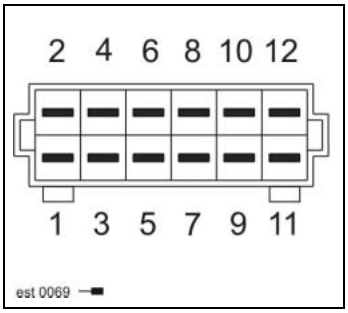
Socket B106/ 107



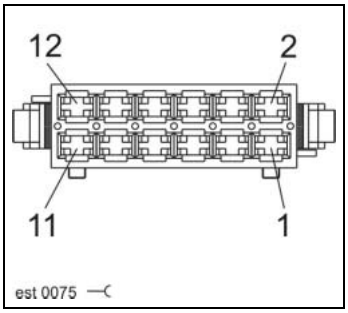
Connector B106/ 107



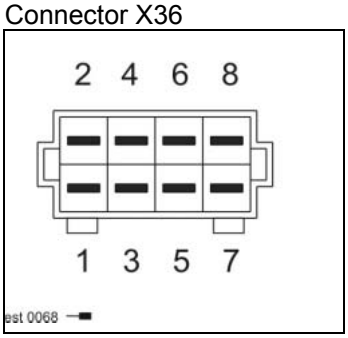
Connector X35



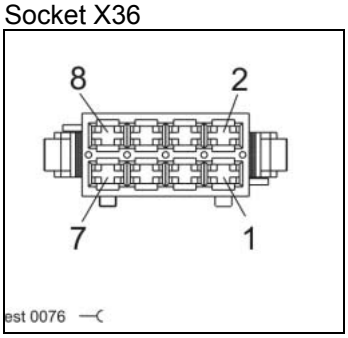
Socket X35



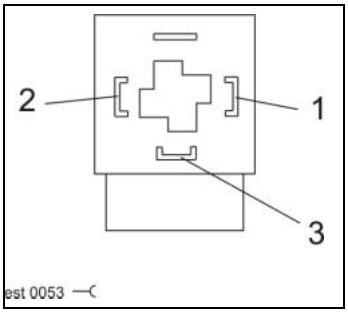
Connector X36



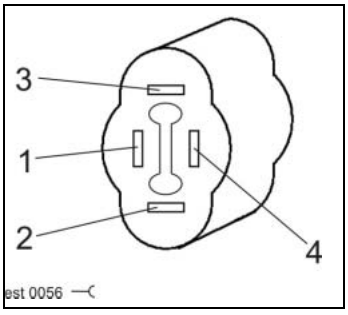
Socket X36



Socket Y133/ 134



Socket Z91/ Z91-2



Connector pin definition

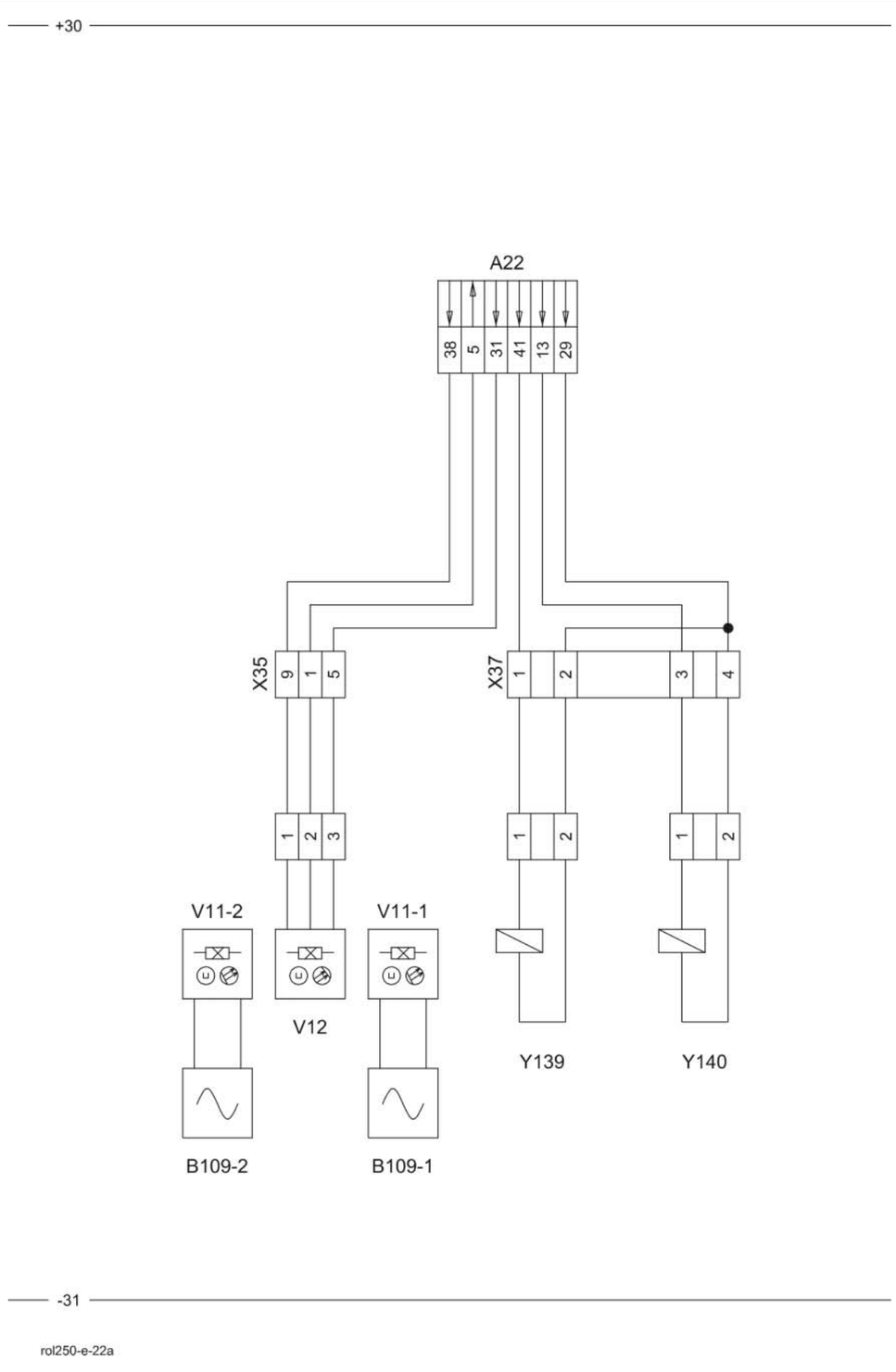
Connector	mm²	Colour
B106-1	1.0	wt-bk
B106-2	1.0	gn
B106-3	1.0	rd-bk
B107-1	1.0	wt-ye
B107-2	1.0	ye
B107-3	1.0	rd-gr
X35-2	1.0	gn
X35-3	1.0	ye
X35-4	1.0	bk
X35-5	1.0	rd
X35-6	1.0	rd-gr
X35-8	1.0	wt
X35-9	1.0	wt-bk
X35-10	1.0	wt-ye
X35-11	1.0	br-ye
X35-12	1.0	br
X36-3	1.0	br
X36-4	1.0	bl
Y133-1	1.0	br
Y133-2	1.0	bl
Y134-1	1.0	br-ye
Y134-2	1.0	br
Z91-1 – 1	1.0	bk
Z91-1 – 2	1.0	wt
Z91-2 – 1	1.0	bk
Z91-2 – 2	1.0	wt

22a

Open / close film cutter, film break monitoring

UNIWRAP

22a - Open / close film cutter, film break monitoring - UNIWRAP



Key to diagram:

A22	Bale wrapper module	E-10
B109-1	Film break sensor	Wiring loom M
B109-2	Film break sensor	Wiring loom M
X35	Connector	Wiring loom M
X37	Connector	Wiring loom K
Y139	Open film cutters solenoid coil	Wiring loom K
Y140	Close film cutters solenoid coil	Wiring loom K
V11-1	Film break monitoring transmitter	Wiring loom M
V11-2	Film break monitoring transmitter	Wiring loom M
V12	Film break monitoring receiver	Wiring loom M

Measured value table:

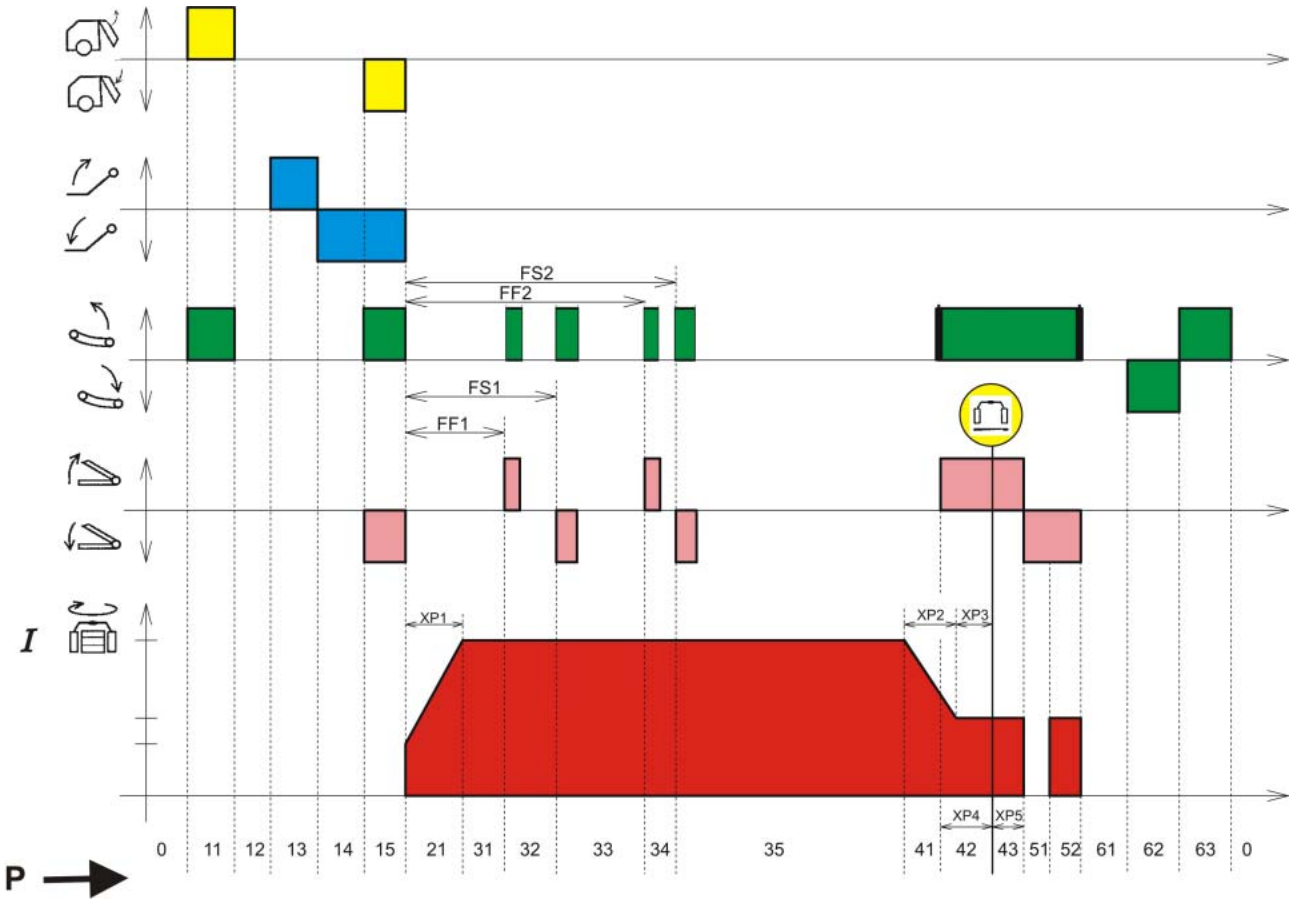
Item	Component	Measured value	Note
B109-1 B109-1	Sensor	1000 – 1200 Ω	Inductive The signal voltage depends on the speed and on the clearance from the gear.
V11 V12	Transmitter coil Receiver coil		
Y139 Y140	Solenoid coil	1.9 A; 6.4 Ω	

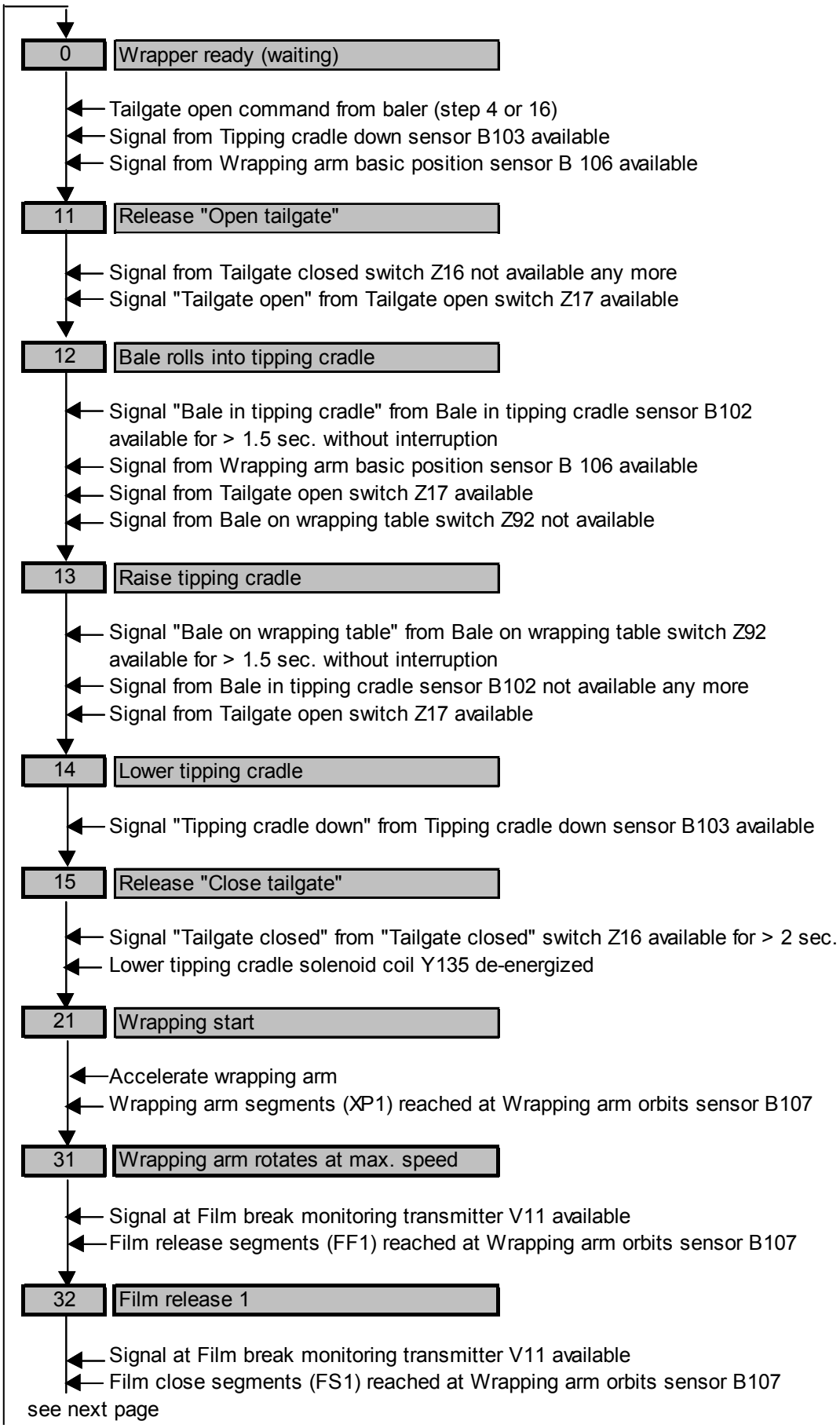
Description of function:

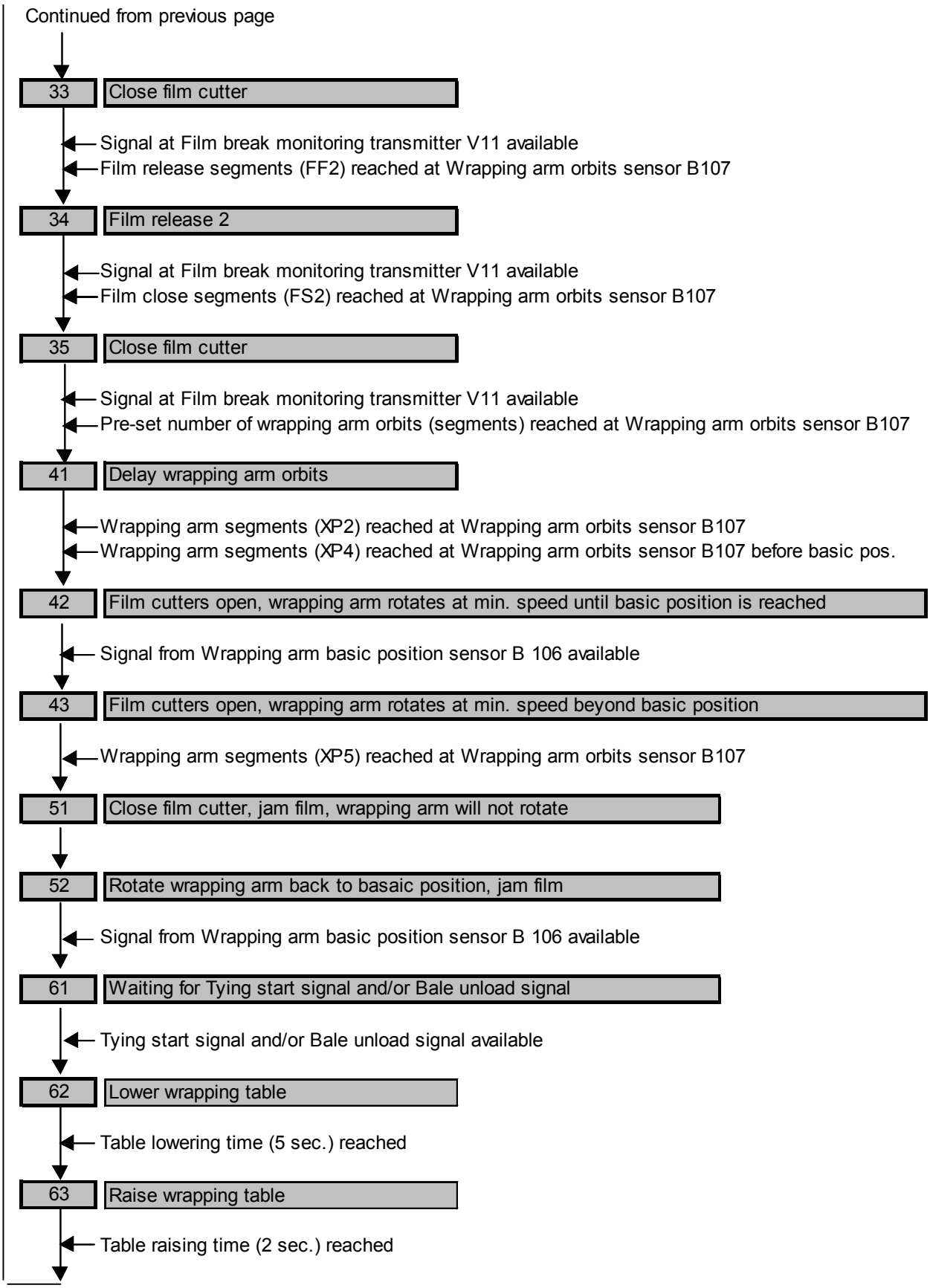
Opening and closing of film cutters	To open and close the film cutters, the Open film cutters solenoid coil Y139 and Close film cutters solenoid coil Y140 are actuated. The Wrapping table raise solenoid coil (Y138) is actuated in parallel with this function. This is required in order to transmit a load pressure signal to the input pressure balance and to actuate the latter (see also "Hydraulic System" chapter).
Film break monitoring	Rotation of the film rolls is monitored during the wrapping process under the pre-condition that the wrapping arm is accelerated and rotates with a min. speed of 20 rpm. It is also necessary to activate the film break monitoring via terminal A30 or A30-1 (see also relevant chapter in Operator's Manual).
Sensor signals	At the top end of the stretch rolls, 4 magnets rotate below the Film break sensors B109-1 and B109-2. According to the speed and the clearance to the magnets, the sensors generate an alternating current. The Film break monitoring transmitters V11-1 and V11-2 convert this alternating current into a corresponding magnetic field.
Signal detection	At each rotation of the wrapping arm, the Film break monitoring receiver V12 detects the Film break monitoring transmitters V11-1 and V11-2. When a transmitter has not been detected, the wrapping process is stopped and the film break message is displayed in terminal A30 / A30-1.
Sensor setting	On the pre-stretcher units, the film break sensors B109-1/109-2 should be set to a clearance of 2-3 mm from the magnets (see Wiring loom M). The clearance from the Film break monitoring transmitter V11-1/V11-2 to the Film break monitoring receiver V12 should be approx. 10 – 12 mm if the components cover each other up (see Wiring loom M).

Wrapping sequence diagram:

The program steps (P) are displayed in menu 5/… of terminal A30 during the wrapping process.

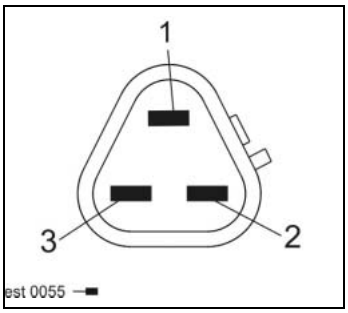



0
Wrapper ready (waiting)
Tailgate open command from baler (step 4 or 16)
Signal from Tipping cradle down sensor B103 available
Signal from Wrapping arm basic position sensor B 106 available
11
Release "Open tailgate"
Signal from Tailgate closed switch Z16 not available any more
Signal "Tailgate open" from Tailgate open switch Z17 available
12
Bale rolls into tipping cradle
Signal "Bale in tipping cradle" from Bale in tipping cradle sensor B102 available for > 1.5 sec. without interruption
Signal from Wrapping arm basic position sensor B 106 available
Signal from Tailgate open switch Z17 available
Signal from Bale on wrapping table switch Z92 not available
13
Raise tipping cradle
Signal "Bale on wrapping table" from Bale on wrapping table switch Z92 available for > 1.5 sec. without interruption
Signal from Bale in tipping cradle sensor B102 not available any more
Signal from Tailgate open switch Z17 available
14
Lower tipping cradle
Signal "Tipping cradle down" from Tipping cradle down sensor B103 available
15
Release "Close tailgate"
Signal "Tailgate closed" from "Tailgate closed" switch Z16 available for > 2 sec.
Lower tipping cradle solenoid coil Y135 de-energized
21
Wrapping start
Accelerate wrapping arm
Wrapping arm segments (XP1) reached at Wrapping arm orbits sensor B107
31
Wrapping arm rotates at max. speed
Signal at Film break monitoring transmitter V11 available
Film release segments (FF1) reached at Wrapping arm orbits sensor B107
32
Film release 1
Signal at Film break monitoring transmitter V11 available
Film close segments (FS1) reached at Wrapping arm orbits sensor B107
see next page

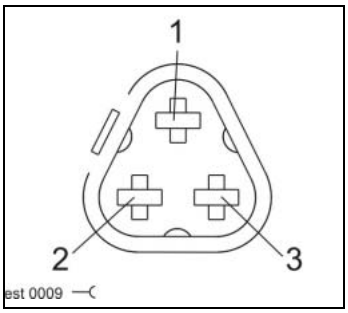

Continued from previous page
33
Close film cutter
Signal at Film break monitoring transmitter V11 available
Film release segments (FF2) reached at Wrapping arm orbits sensor B107
34
Film release 2
Signal at Film break monitoring transmitter V11 available
Film close segments (FS2) reached at Wrapping arm orbits sensor B107
35
Close film cutter
Signal at Film break monitoring transmitter V11 available
Pre-set number of wrapping arm orbits (segments) reached at Wrapping arm orbits sensor B107
41
Delay wrapping arm orbits
Wrapping arm segments (XP2) reached at Wrapping arm orbits sensor B107
Wrapping arm segments (XP4) reached at Wrapping arm orbits sensor B107 before basic pos.
42
Film cutters open, wrapping arm rotates at min. speed until basic position is reached
Signal from Wrapping arm basic position sensor B 106 available
43
Film cutters open, wrapping arm rotates at min. speed beyond basic position
Wrapping arm segments (XP5) reached at Wrapping arm orbits sensor B107
51
Close film cutter, jam film, wrapping arm will not rotate
52
Rotate wrapping arm back to basaic position, jam film
Signal from Wrapping arm basic position sensor B 106 available
61
Waiting for Tying start signal and/or Bale unload signal
Tying start signal and/or Bale unload signal available
62
Lower wrapping table
Table lowering time (5 sec.) reached
63
Raise wrapping table
Table raising time (2 sec.) reached

Connector pin definition

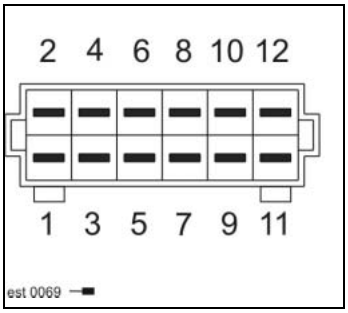
Connector V12



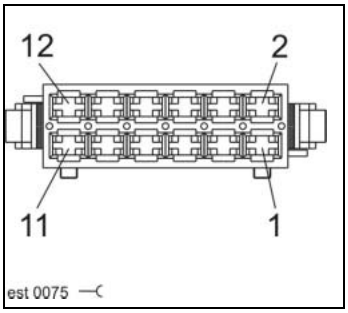
Socket V12



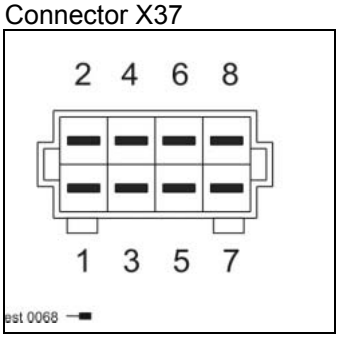
Connector X35



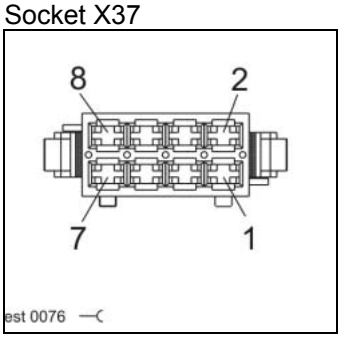
Socket X35



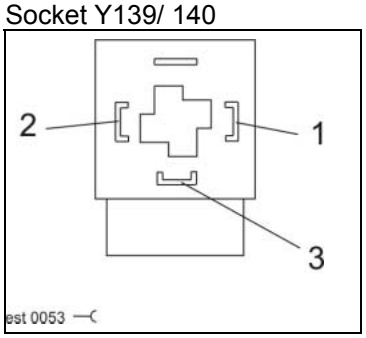
Connector X37



Socket X37



Socket Y139/ 140



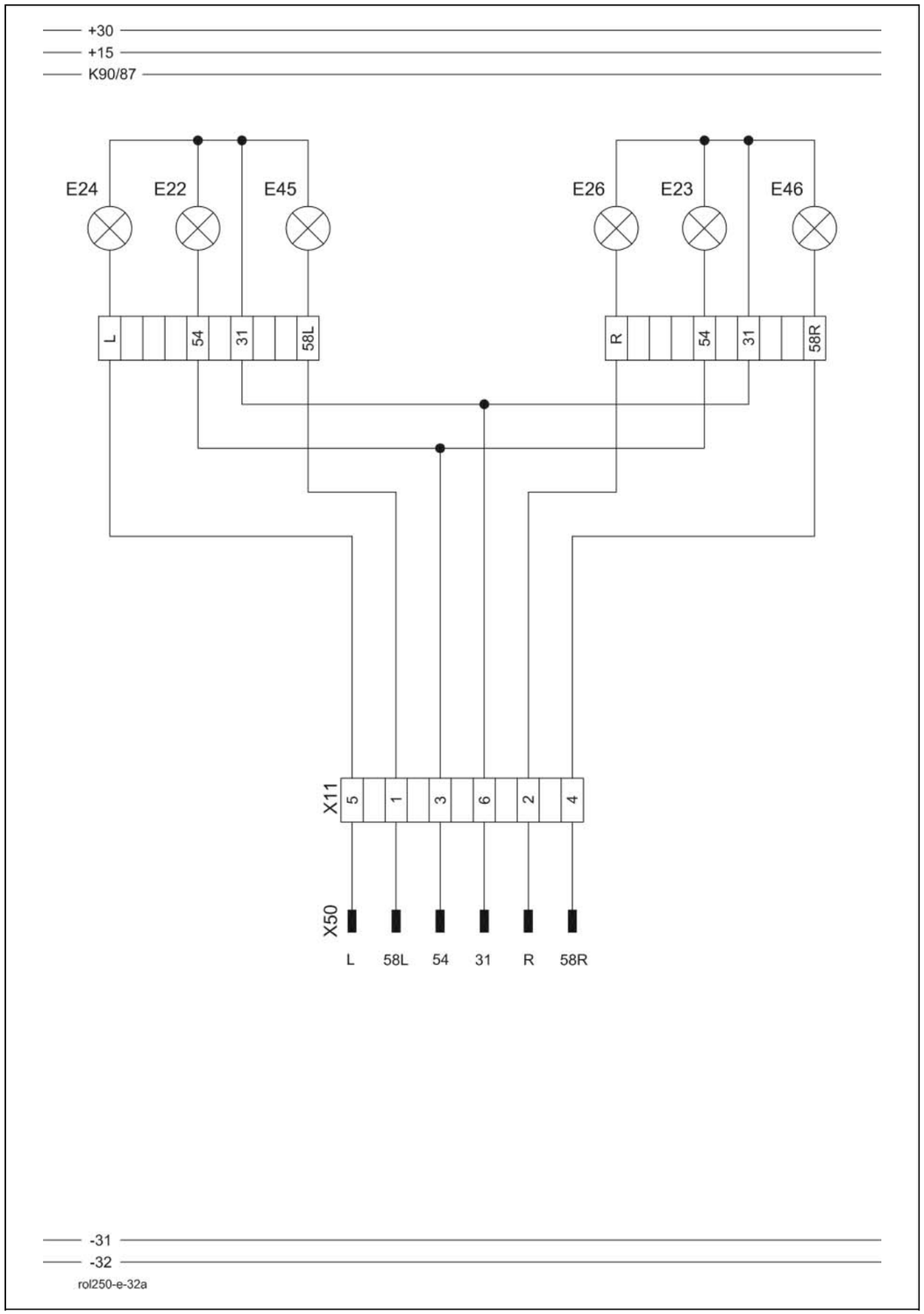
Connector	mm²	Colour
V12-1	1.0	wt-rd
V12-2	1.0	gr
V12-3	1.0	rd
X35-1	1.0	gr
X35-5	1.0	rd
X35-9	1.0	wt-rd
X37-1	1.0	br
X37-2	1.0	bl
X37-3	1.0	br
X37-4	1.0	bl

Connector	mm²	Colour
Y139-1	1.0	br
Y139-2	1.0	bl
Y140-1	1.0	br
Y140-2	1.0	bl

32a

Taillight, side light

32a - Taillight, side light (with central terminal compartment)



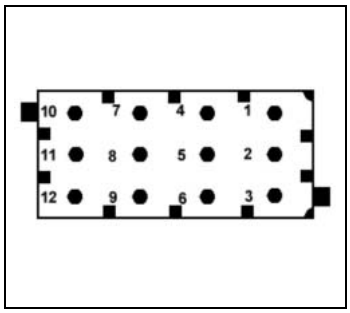
Key to diagram:

E22	Brake light, left
E23	Brake light, right
E24	Turn flasher light, rear left
E26	Turn flasher light, rear right
E45	Taillight, left
E46	Taillight, right
X11	Lighting wiring loom
X50	Lighting wiring loom

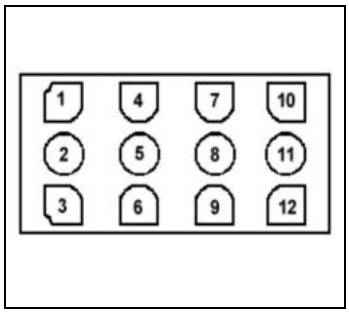
Description of function: None

Connector pin definition

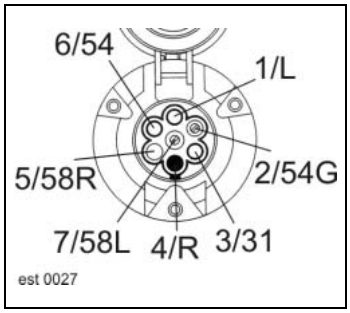
Connector X11



Socket X11



Socket X13



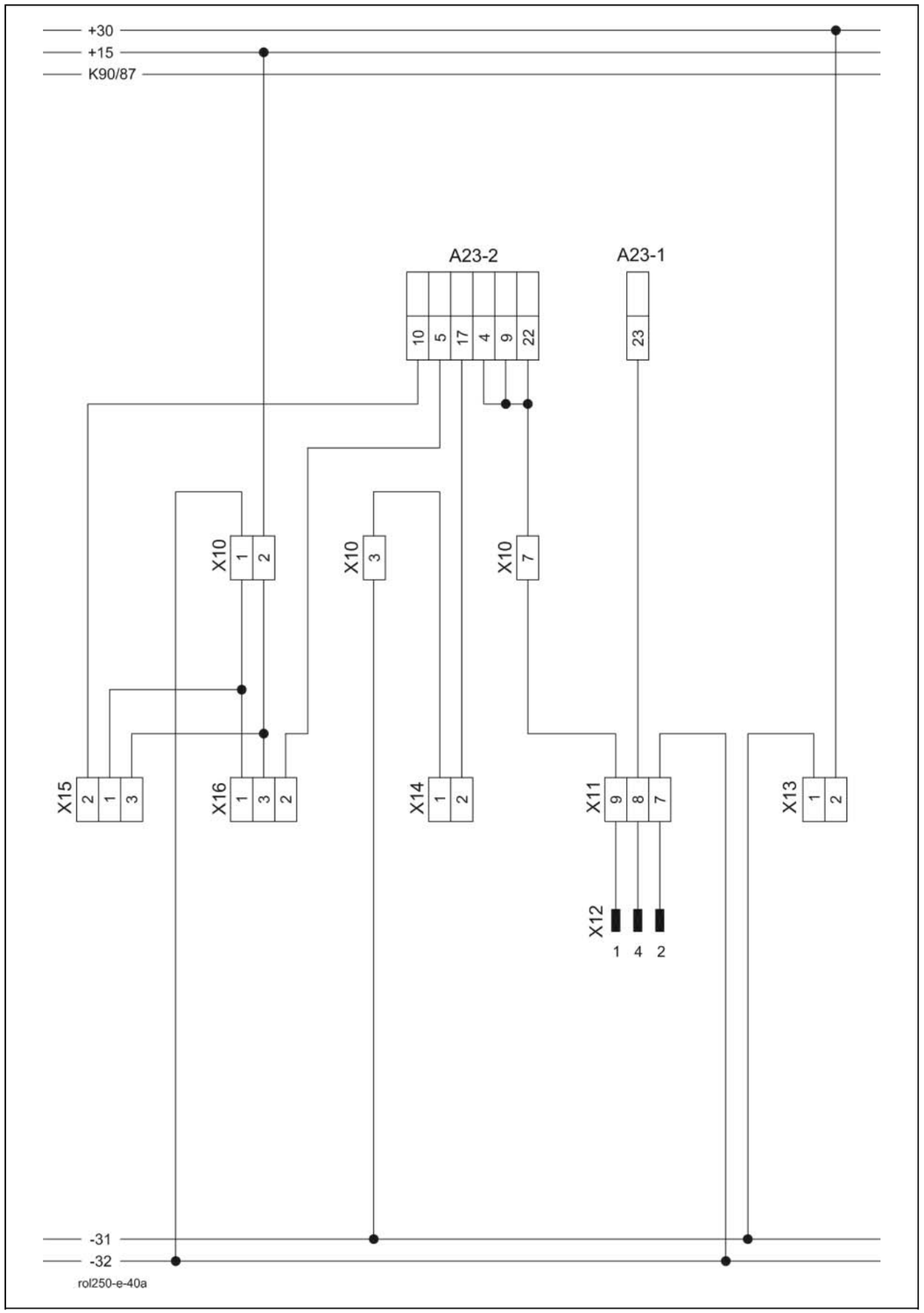
Connector	mm²	Colour
X11-1	1.5	gr-bk
X11-2	1.5	bk-gn
X11-3	1.5	bk-rd
X11-4	1.5	gr-rd
X11-5	1.5	bk-wt
X11-6	1.5	br
X13-31	1.5	br
X13-54	1.5	bk-rd
X13-58L	1.5	gr-bk
X13-58R	1.5	gr-rd
X13- L	1.5	bk-wt
X13- R	1.5	bk-gn

40a

Additional sockets

Rollant 250 Comfort

40a - Additional sockets



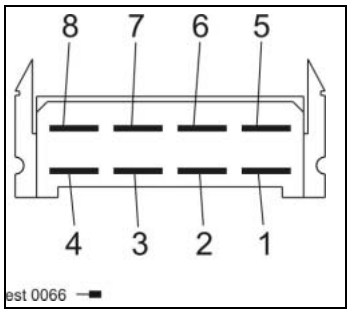
Key to diagram:

A23-1	ROLLANT 250 module 1	Wiring loom B - part 2
A23-2	ROLLANT 250 module 2	Wiring loom B - part 2
X10	Connector	Wiring loom B - part 2 / C
X11	Connector	Wiring loom B - part 2
X12	Socket (no function)	not shown
X13	Power supply connector (external consumers)	Wiring loom B - part 2
X14	Socket (no function)	Wiring loom C
X15	Socket (no function)	Wiring loom C
X16	Socket (no function)	Wiring loom C

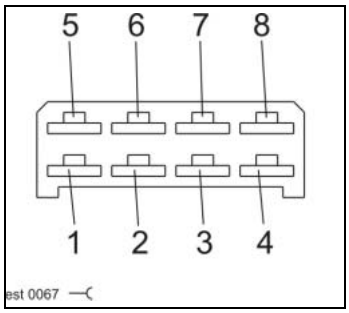
Description of function: None

Connector pin definition

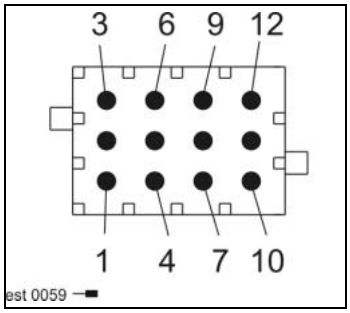
Connector X10



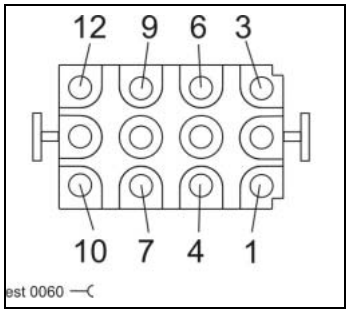
Socket X10



Connector X11



Socket X11



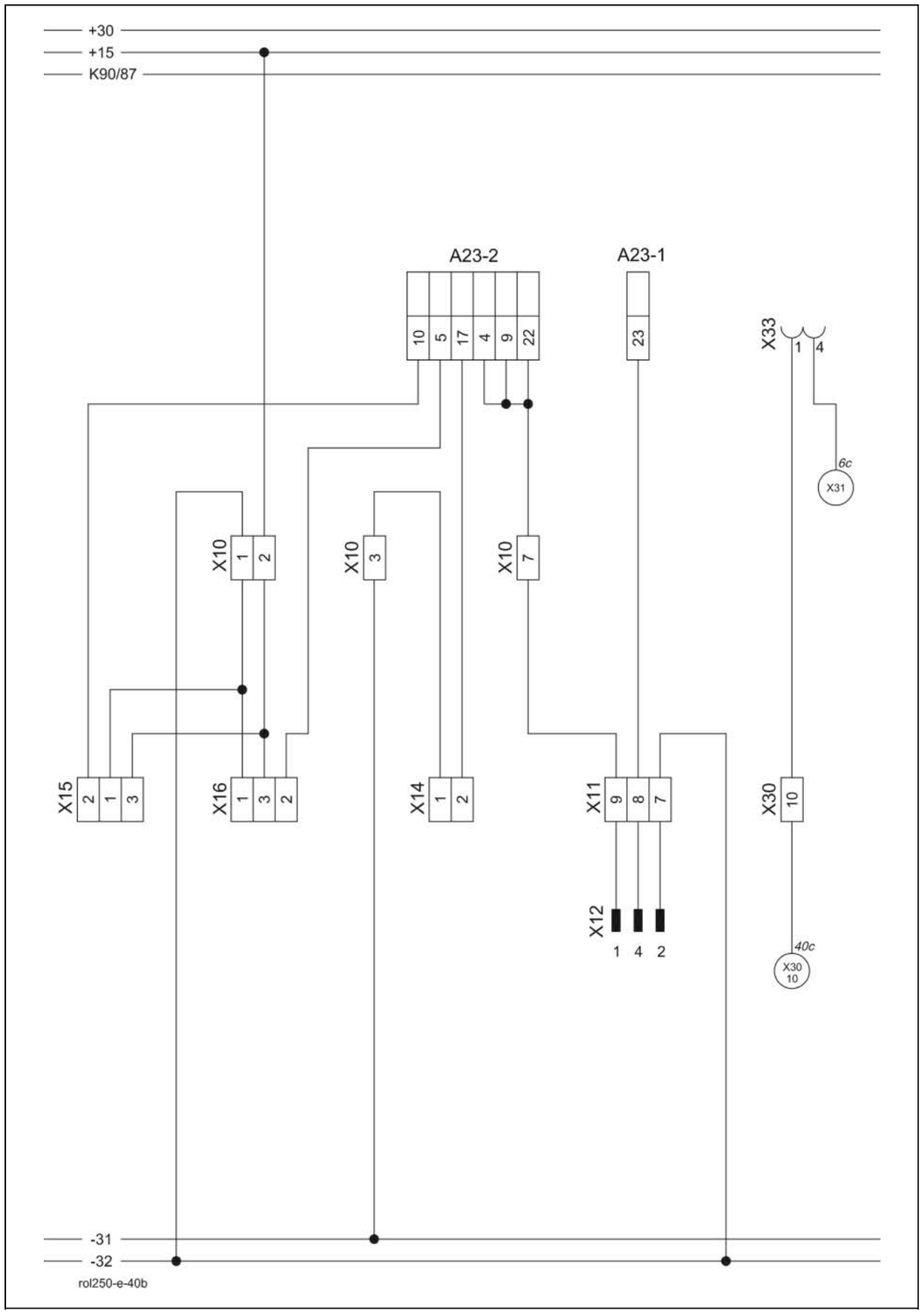
Connector	mm²	Colour
X10 – 1	1.0	br-rd
X10 – 2	1.0	bk-rd
X10 – 3	2.5	br
X10 – 7	0.5	rd-wt
X11 – 7	0.5	br-rd
X11 – 8	0.5	gr-wt
X11 – 9	0.5	rd-wt
X12 – 1	0.5	rd-wt
X12 – 2	0.5	br-rd
X12 – 4	0.5	gr-wt
X13 – 1	1.5	br
X13 – 2	4.0	bk
X14 – 1	0.5	br
X14 – 2	0.5	rd-ye
X15 – 1	0.5	br-rd
X15 – 2	0.5	gr-bk
X15 – 3	0.5	bk-rd
X16 – 1	0.5	br-rd
X16 – 2	0.5	br-bk
X16 – 3	0.5	bk-rd

40b

Additional sockets

Rollant 250 Comfort for UNIWRAP

40b - Additional sockets



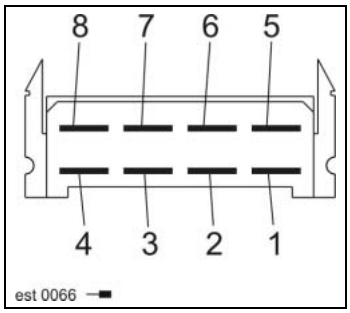
Key to diagram:

A23-1	ROLLANT 250 module 1	Wiring loom B - part 2
A23-2	ROLLANT 250 module 1	Wiring loom B - part 2
X10	Connector	Wiring loom B - part 2 / C
X11	Wiring loom B connector	Wiring loom B - part 2
X12	Socket (no function)	not shown
X14	Socket (no function)	Wiring loom C
X15	Socket (no function)	Wiring loom C
X16	Socket (no function)	Wiring loom C
X30	Connector	Wiring loom D / K
X33	Socket (no function)	Wiring loom D

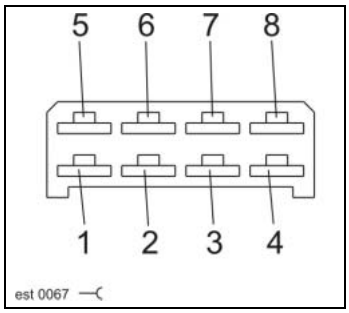
Description of function: None

Connector pin definition

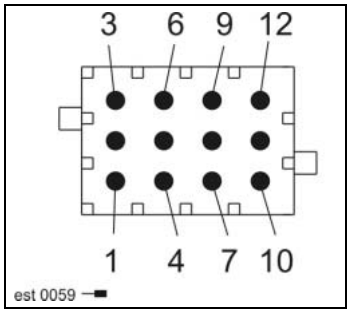
Connector X10



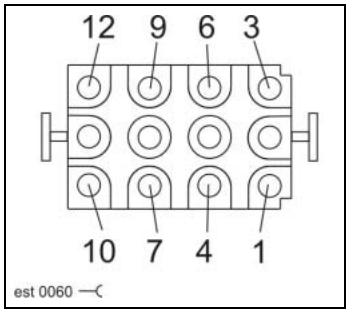
Socket X10



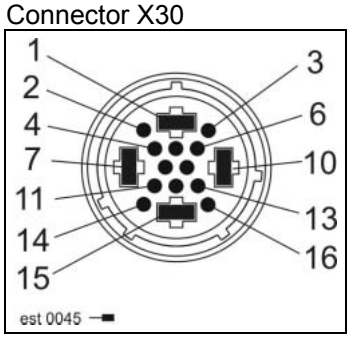
Connector X11



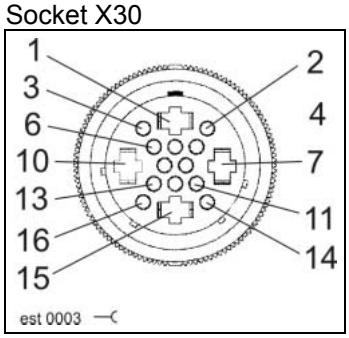
Socket X11



Connector X30



Socket X30



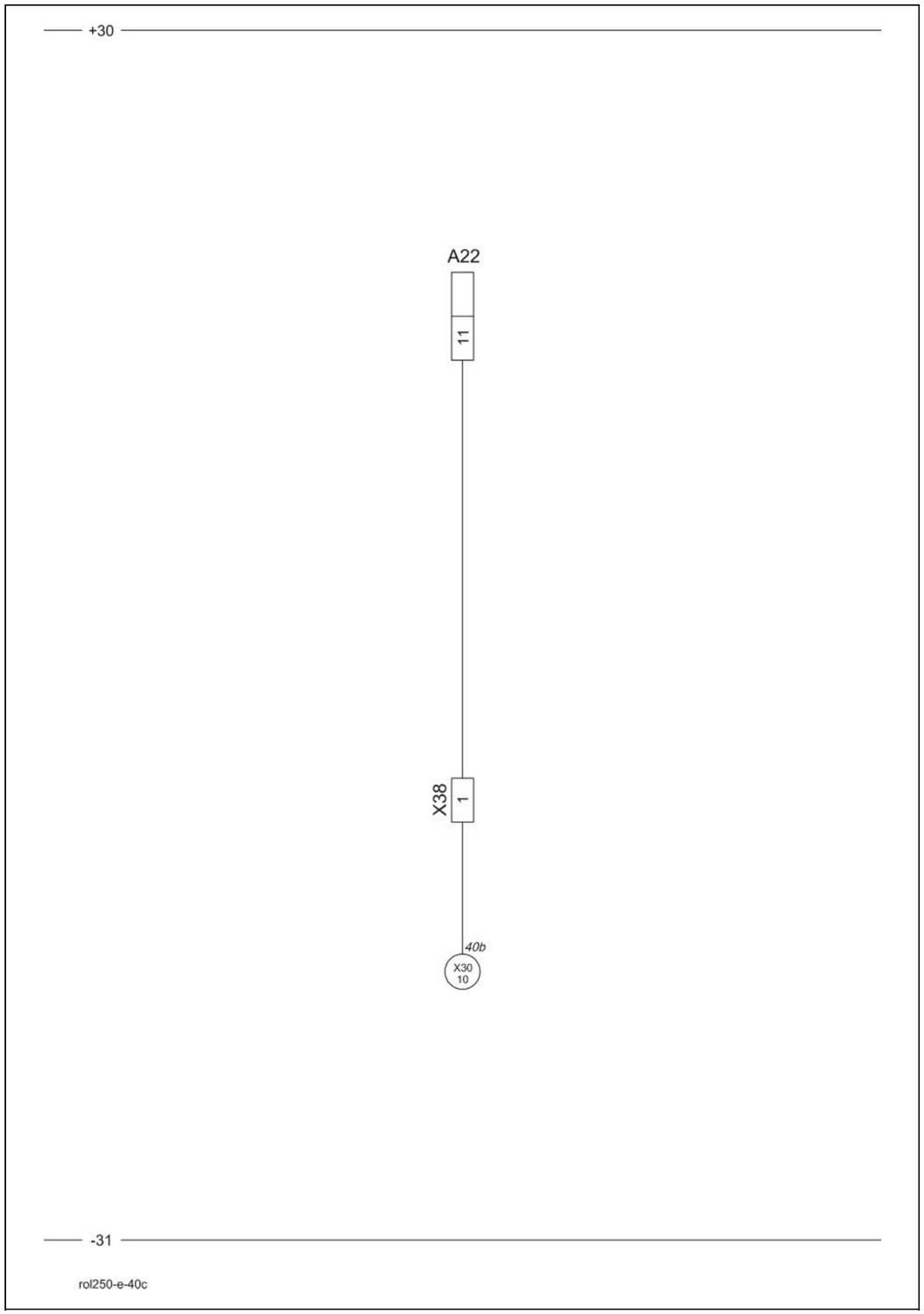
Connector	mm²	Colour
X10 – 1	1.0	br-rd
X10 – 2	1.0	bk-rd
X10 – 3	2.5	br
X10 – 7	0.5	rd-wt
X11 – 7	0.5	br-rd
X11 – 8	0.5	gr-wt
X11 – 9	0.5	rd-wt
X12 – 1	0.5	rd-wt
X12 – 2	0.5	br-rd
X12 – 4	0.5	gr-wt
X13 – 1	1.5	br
X13 – 2	4.0	bk
X14 – 1	0.5	br
X14 – 2	0.5	rd-ye
X15 – 1	0.5	br.rd
X15 – 2	0.5	gr-bk
X15 – 3	0.5	bk-rd
X16 – 1	0.5	br-rd
X16 – 2	0.5	br-bk
X16 – 3	0.5	bk-rd
X30 – 10	1.0	bk-bl
X33 – 1	1.0	bk-bl
X33 – 4	1.0	bk-rd

40c

Additional sockets

UNIWRAP up to serial no. 130

40c - Additional sockets



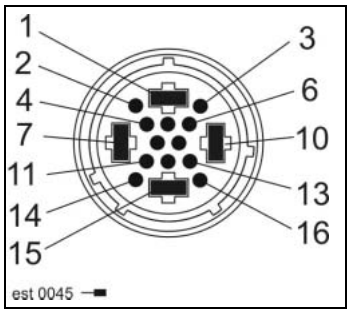
Key to diagram:

A22	Bale wrapper module	E10
X30	Wiring loom connector	Wiring loom D / K
X38	Connector	E10

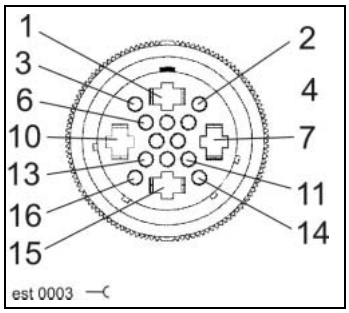
Description of function: None

Connector pin definition

Connector X30



Socket X30



Connector	mm²	Colour
X30 - 10	2.5	bl
X38 - 1	2.5	bl

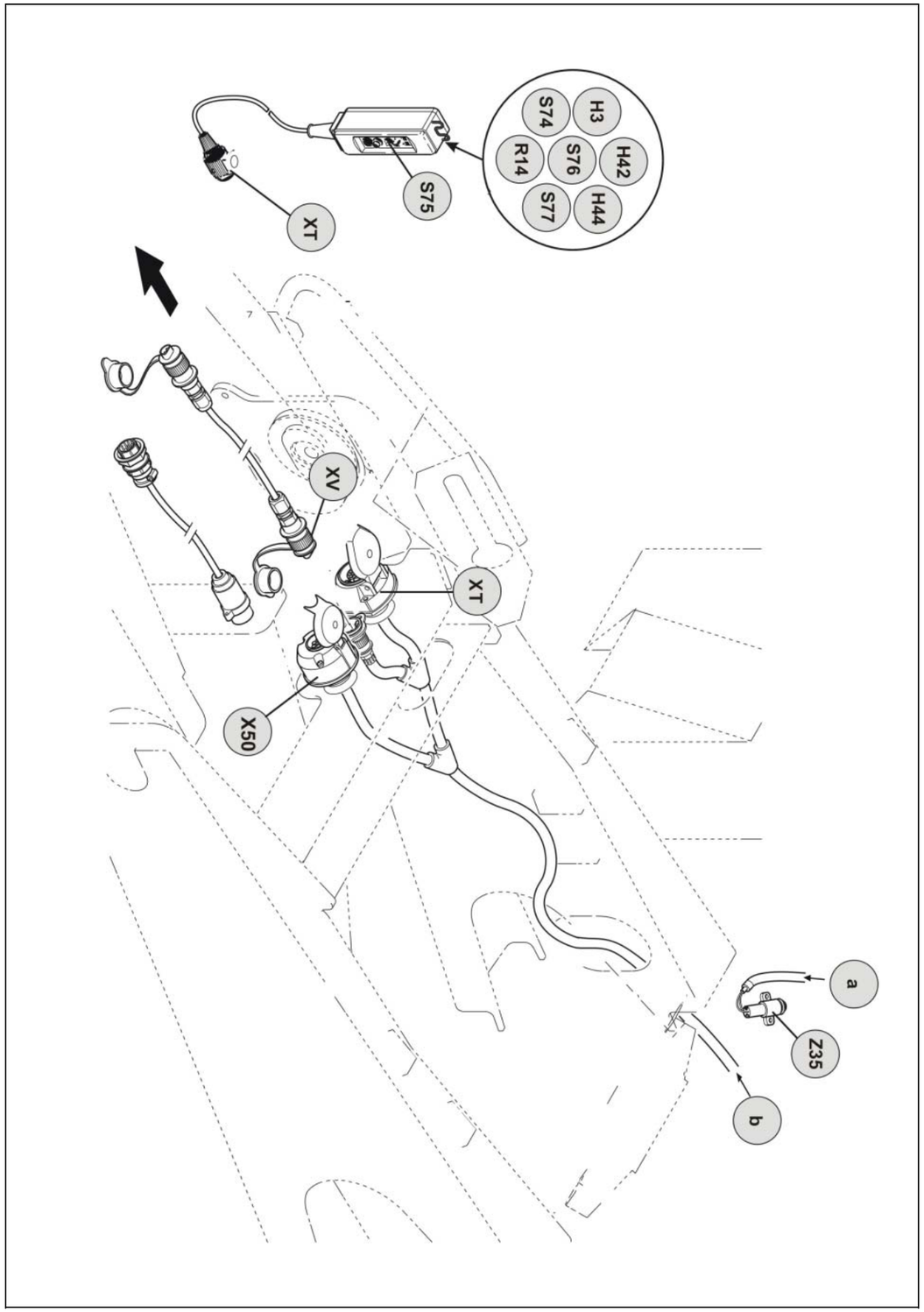
Wiring loom A – part 1

- Rollant 250 Standard

Key to diagram:

	a	Continued in wiring loom A – part 2
	b	Continued in wiring loom A – part 2
H3		Operation signal light 11a
H42		STOP signal light 11a
H44		Buzzer 11a
R14		CAN BUS matching resistor 6a
S74		Wrapping type selector switch 11a
S75		Main switch ON / OFF - Rotocut ON / OFF 1a, 7a
S76		Wrapping delay switch (manual) 11a
S77		Wrapping release switch (manual) 11a
X50		Lighting wiring loom connector 32a
XT		Terminal connector 1a
XV		Power supply connector 1a
Z35		Cam track actual value switch 11a

Wiring loom A – part 1 (Rollant 250 Standard)



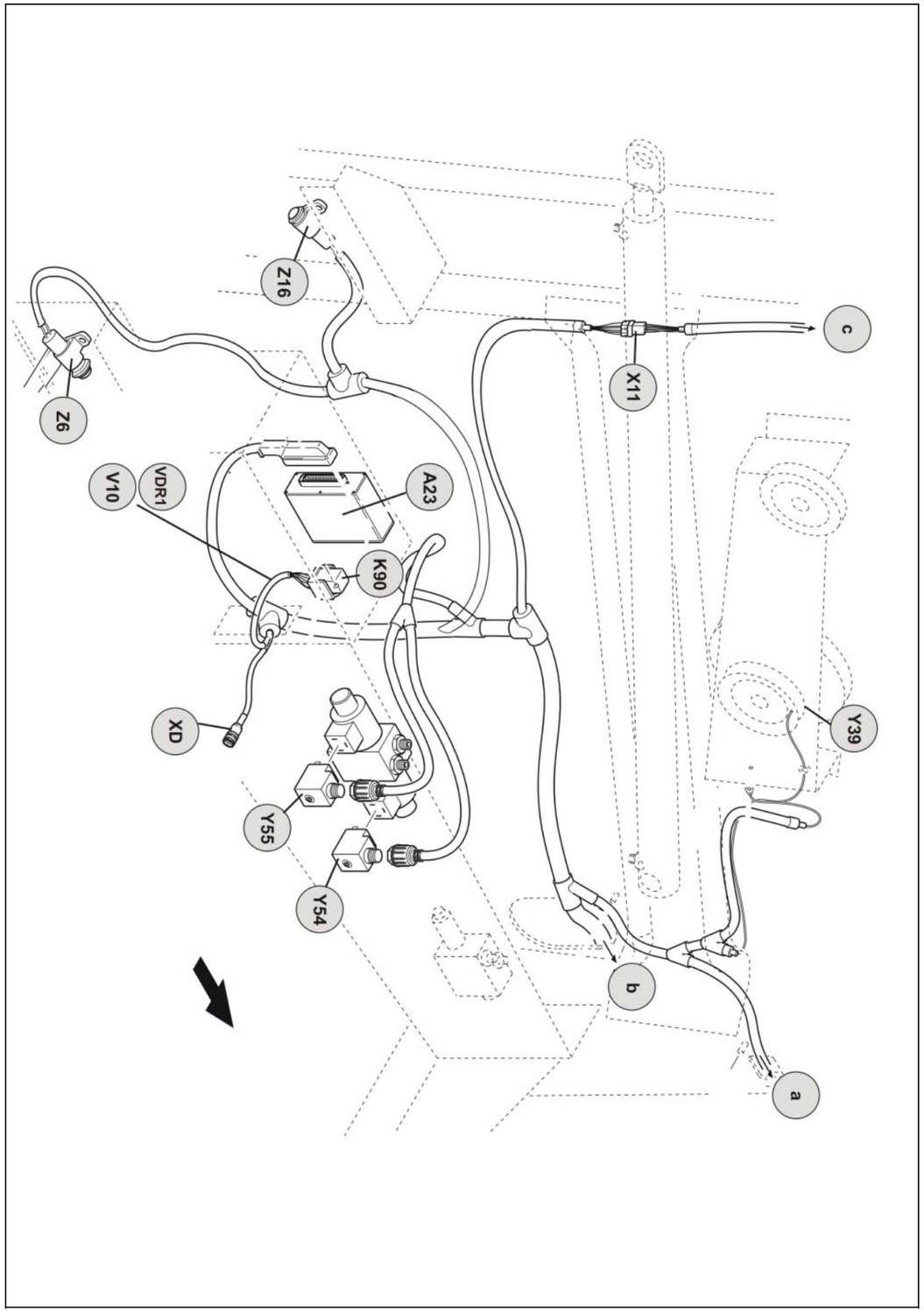
Wiring loom A – part 2

- Rollant 250 Standard

Key to diagram:

a	Continued in wiring loom A – part 1	
b	Continued in wiring loom A – part 1	
c	Lighting wiring loom	32a
A23	Module	6a, 7a, 11a
K90	Power supply relay K90/87	1a
V10	Reverse polarity protection diode	1a
VDR1	Varistor	1a
XD	CAN bus connector (7 pin)	6a
X11	Lighting wiring loom connector	32a
Y39	Twine/net coupling solenoid coil	11a
Y54	ROTOCUT knives OFF solenoid coil	7a
Y55	ROTOCUT knives ON solenoid coil	7a
Z6	Bale ejector actual value switch	11a
Z16	Tailgate closed actual value switch	11a

Wiring loom A – part 2 (Rollant 250 Standard)



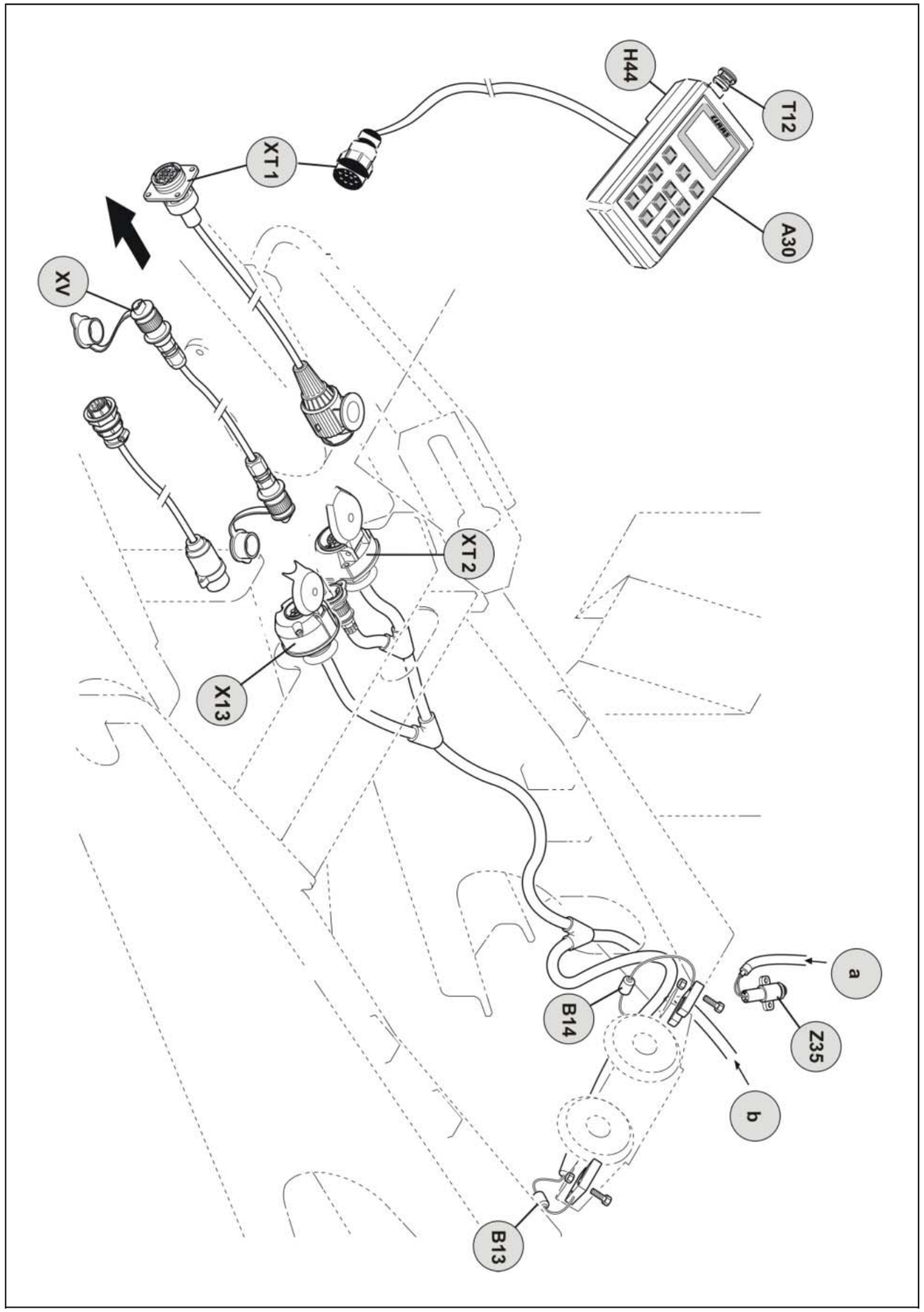
Wiring loom B – part 1

- Rollant 250 Comfort
- Rollant 250 Comfort for UNIWRAP

Key to diagram:

a	Continued in wiring loom B – part 2	
b	Continued in wiring loom B – part 2	
A30	CCT terminal	5a
B13	Twine roll left rpm sensor	11c
B14	Twine roll left rpm sensor	11c
H44	Buzzer	5a
T12	Main switch	1b, 1c
XT1	Terminal connector	1b, 1c
XT2	Terminal connector	1b, 1c
XV	Power supply connector	1b, 1c
X50	Lighting wiring loom connector	32a
Z35	Cam track actual value switch	11b

Wiring loom B – part 1 (Rollant 250 Comfort / Rollant 250 Comfort for UNIWRAP)



Wiring loom B – part 2

- Rollant 250 Comfort
- Rollant 250 Comfort for UNIWRAP

Key to diagram:

a Continued in wiring loom B – part 1
b Continued in wiring loom B – part 1
c Lighting wiring loom
d Continued in wiring loom B – part 3
e Continued in wiring loom B – part 3

A23-1 Module 1.....4a, 4b, 5a, 5b, 6b, 6c, 11b, 12a, 40a, 40b
A23-2 Module 2.....6b, 6c, 7b, 20a, 40a, 40b

K90 Power supply relay (protected against reverse polarity).....1b, 1c
K93 Rotocut knives ON/OFF relay 7b

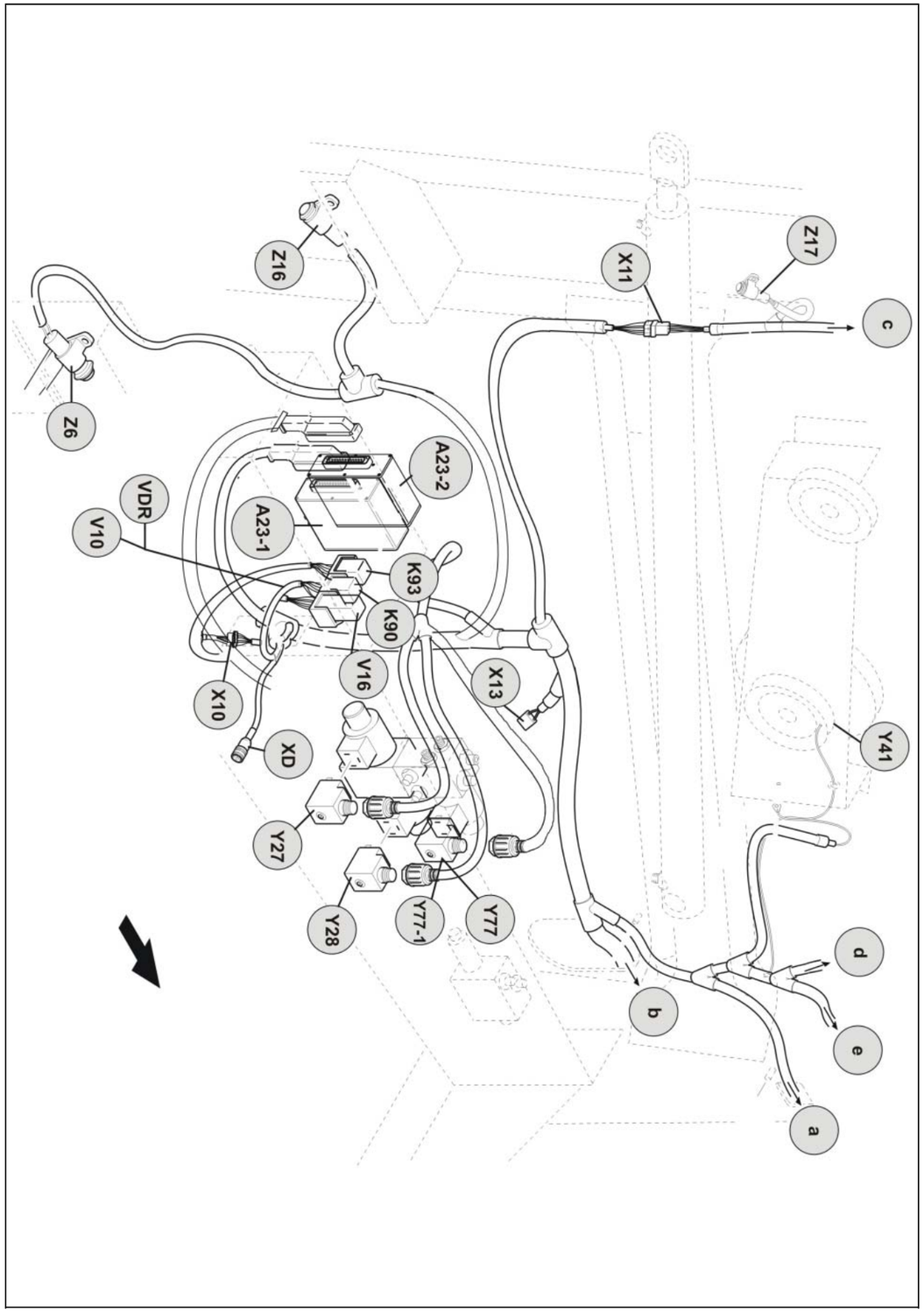
V10 Reverse polarity protection diode.....1b, 1c
V16 Amplifier (net cutter motor).....11b
VDR1 Varistor.....1b, 1c

XD CAN bus connector (7 pin).....6b, 6c
X10 Connector.....6b, 6c
X11 Lighting wiring loom connector.....32a
X13 Power supply connector (external consumers).....40a

Y27 Open tailgate solenoid coil 12a
Y28 Close tailgate solenoid coil 12a
Y41 Net coupling solenoid coil 11b
Y77 Circulation shut-off valve solenoid coil 4a, 4b

Z6 Bale ejector actual value switch.....11b
Z16 Tailgate closed actual value switch.....11b
Z17 Tailgate open actual value switch 11b

Wiring loom B – part 2 (Rollant 250 Comfort / Rollant 250 Comfort for UNIWRAP)



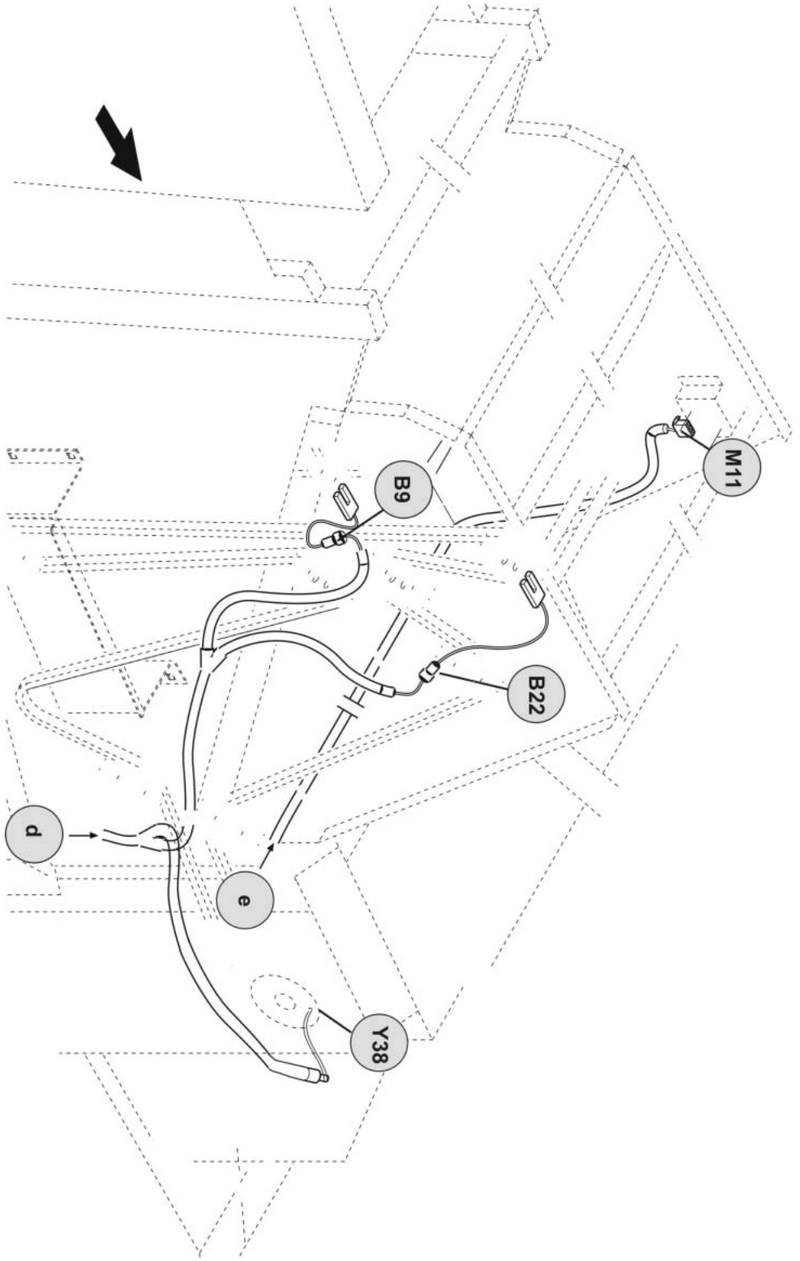
Wiring loom B – part 3

- Rollant 250 Comfort
- Rollant 250 Comfort for UNIWRAP

Key to diagram:

d	Continued in wiring loom B – part 2	
e	Continued in wiring loom B – part 2	
B9	Drive rpm sensor	11b
B22	Net roll rpm sensor	11b
M11	Net cutter motor	11b
Y38	Twine coupling solenoid coil	11b

Wiring loom B – part 3 (Rollant 250 Comfort / Rollant 250 Comfort for UNIWRAP)



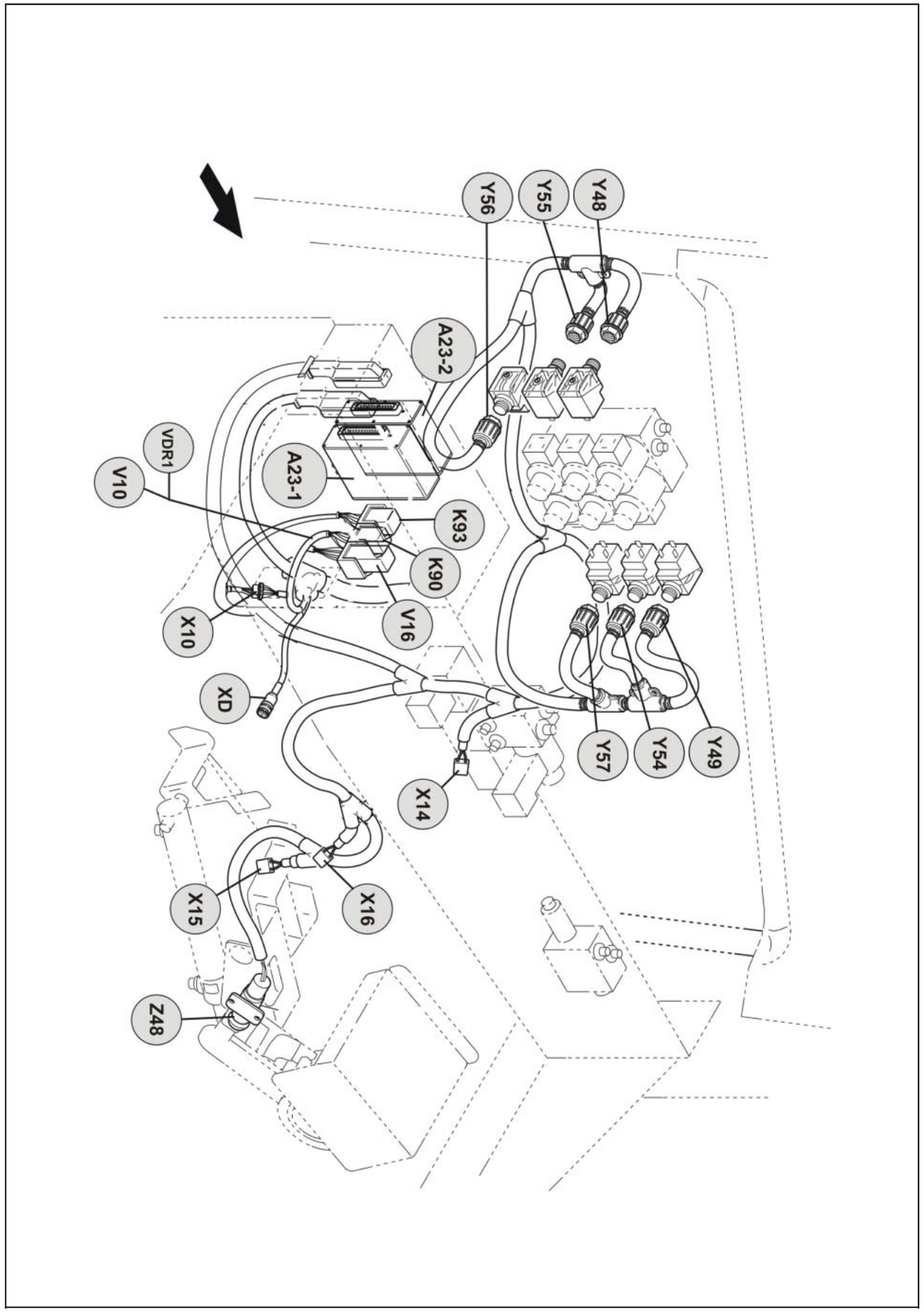
Wiring loom C

- Rollant 250 Comfort
- Rollant 250 Comfort for UNIWRAP

Key to diagram:

A23-1	Module 1	4a, 4b, 5a, 5b, 6b, 6c, 11b, 12a, 40a, 40b
A23-2	Module 2	6b, 6c, 7b, 20a, 40a, 40b
K90	Power supply relay (protected against reverse polarity)	1b, 1c
K93	Rotocut knives ON/OFF relay	7b
V10	Reverse polarity protection diode	1b, 1c
V16	Amplifier (net cutter motor)	11b
VDR1	Varistor	1b, 1c
XD	CAN bus connector (7 pin)	6b, 6c
X14	Socket (no function)	40a, 40b
X15	Socket (no function)	40a, 40b
X16	Socket (no function)	40a, 40b
Y48	Raise pick-up solenoid coil	20a
Y49	Lower pick-up solenoid coil	20a
Y54	ROTOCUT knives OFF solenoid coil	7b
Y55	ROTOCUT knives ON solenoid coil	7b
Y56	Rotor reverse solenoid coil (extend cylinder)	7b
Y57	Rotor reverse solenoid coil (retract cylinder)	7b
Z48	Reverser actual value switch	7b

Wiring loom C (Rollant 250 Comfort / Rollant 250 Comfort for UNIWRAP)



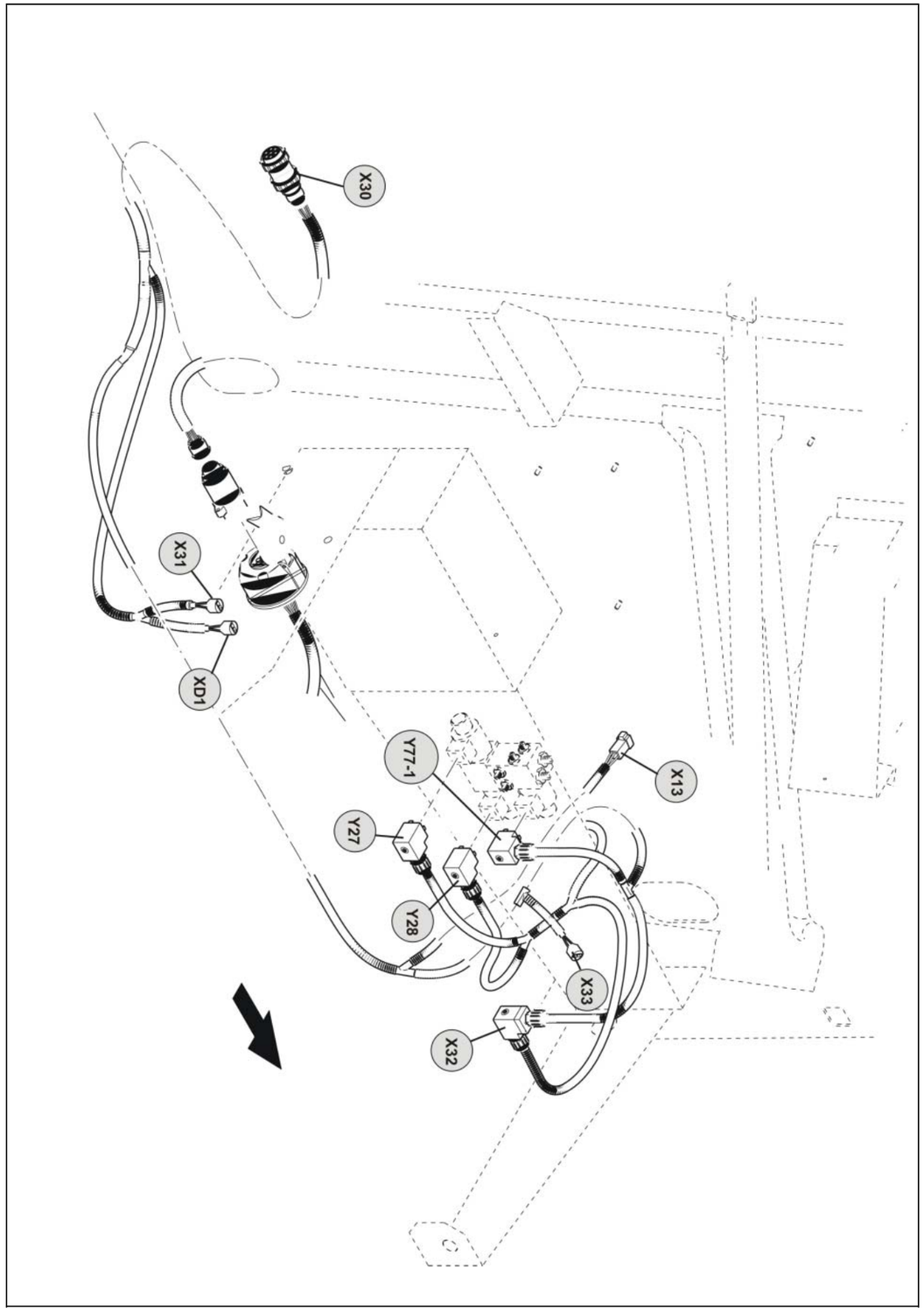
Wiring loom D

- Rollant 250 Comfort for UNIWRAP

Key to diagram:

XD1	CAN bus connector (7 pin)	6c
X13	Connector	40a
X30	Connector	6c
X31	Connector	6c
X32	Connector	4b
X33	Connector	40b
Y27	Tailgate open solenoid coil	12a
Y28	Tailgate close solenoid coil	12a
Y77-1	Circulation shut-off valve Rollant 250 Comfort solenoid coil	4b

Wiring loom D (Rollant 250 Comfort for UNIWRAP)



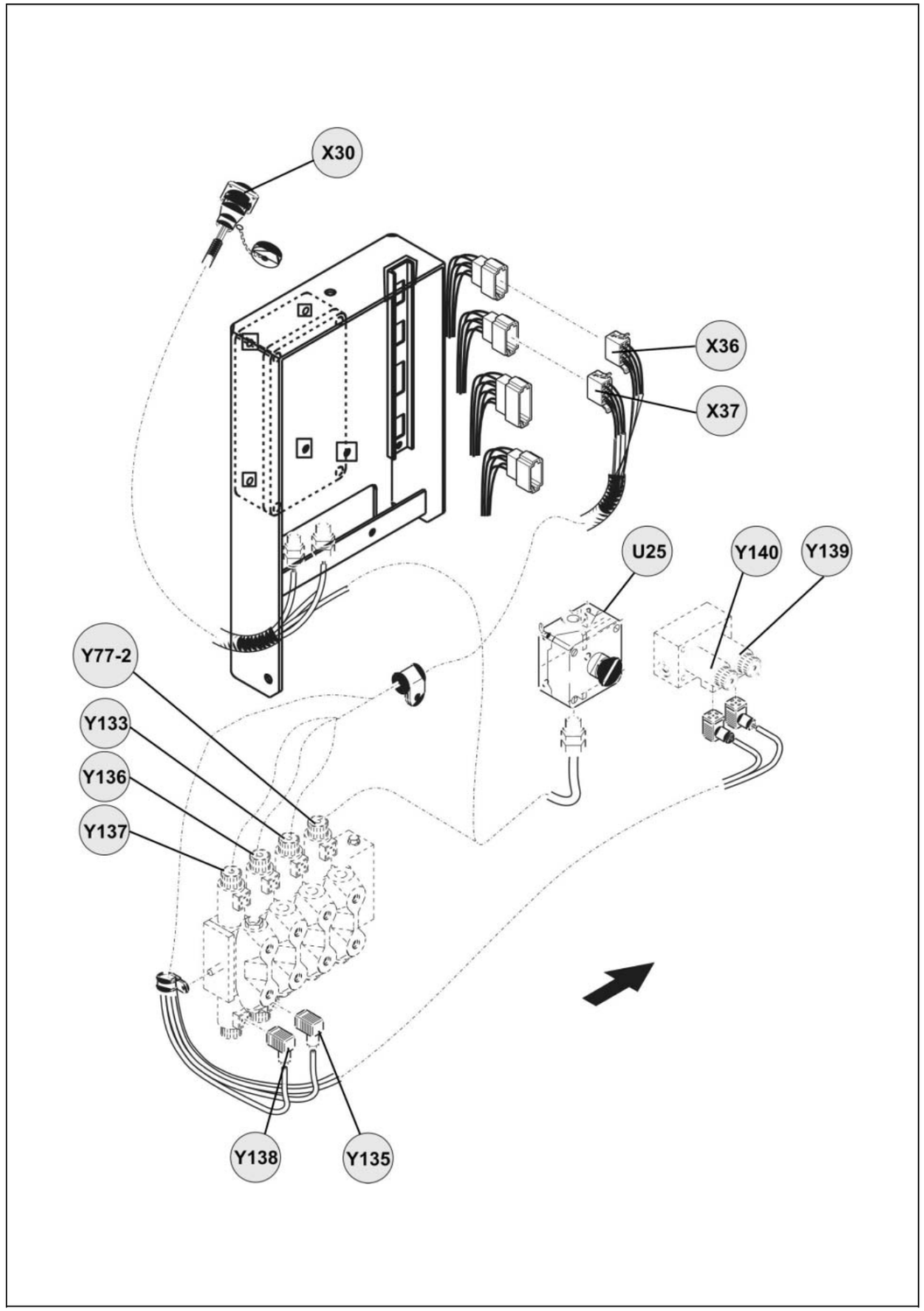
Wiring loom K

- UNIWRAP

Key to diagram:

U25	EMERGENCY OFF switch	1d
X30	Connector	1d
X36	Connector	19a
X37	Connector	19a
Y77-2	Bale wrapper circulation shut-off valve solenoid coil	4c
Y133	Wrapping arm forward solenoid coil	21a
Y135	Lower tipping cradle solenoid coil	19a
Y136	Raise tipping cradle solenoid coil	19a
Y137	Lower wrapping table solenoid coil	19a
Y138	Raise wrapping table solenoid coil	19a
Y139	Open film cutters solenoid coil	22a
Y140	Close film cutters solenoid coil	22a

Wiring loom K (UNIWRAP)



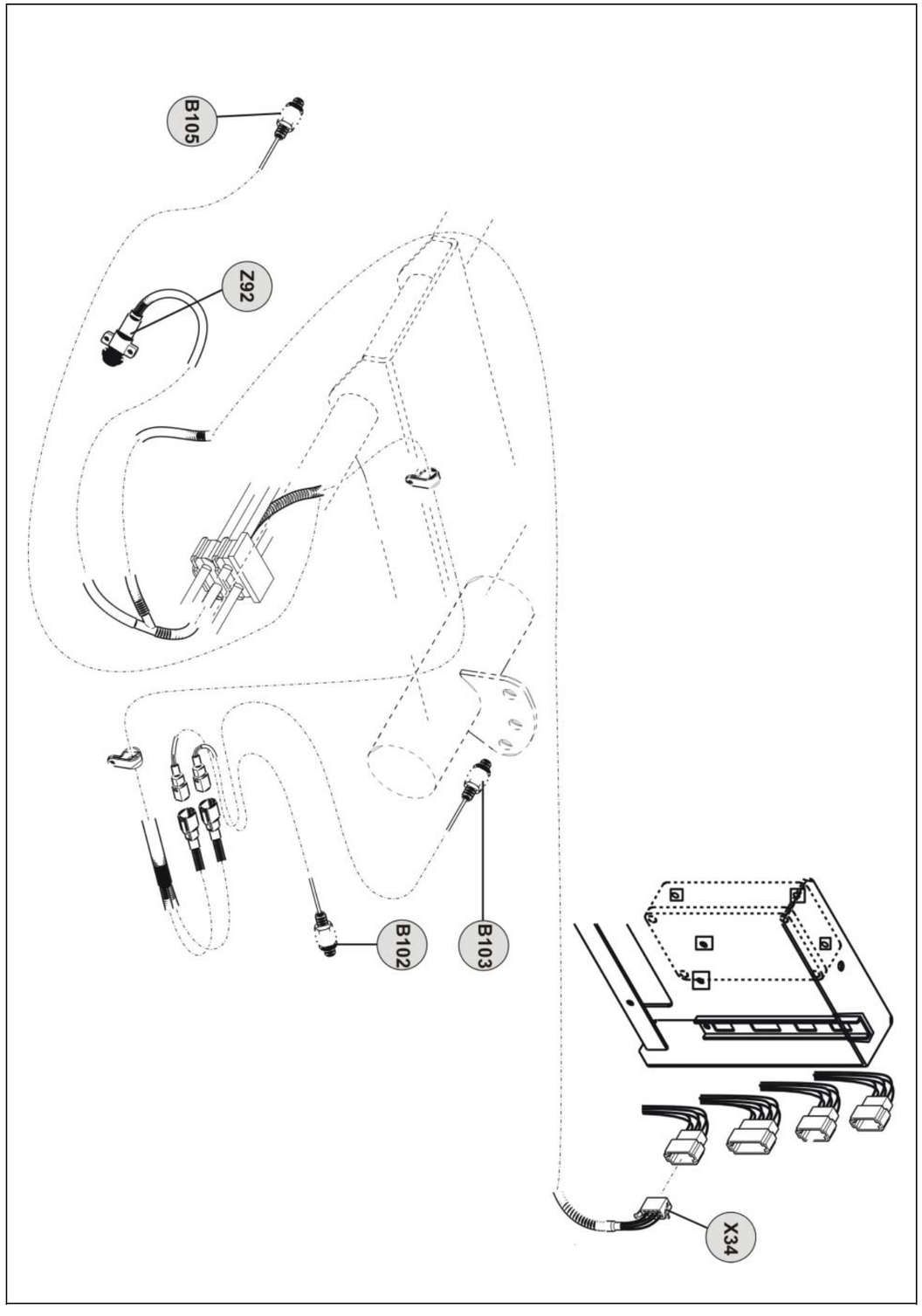
Wiring loom L

- UNIWRAP

Key to diagram:

B102	Bale in tipping cradle sensor	19a
B103	Tipping cradle down sensor	19a
B105	Wrapping table up sensor	19a
X34	Connector	19a
Z92	Bale on wrapping table actual value switch	19a

Wiring loom L (UNIWRAP)



Wiring loom M

- UNIWRAP

Key to diagram:

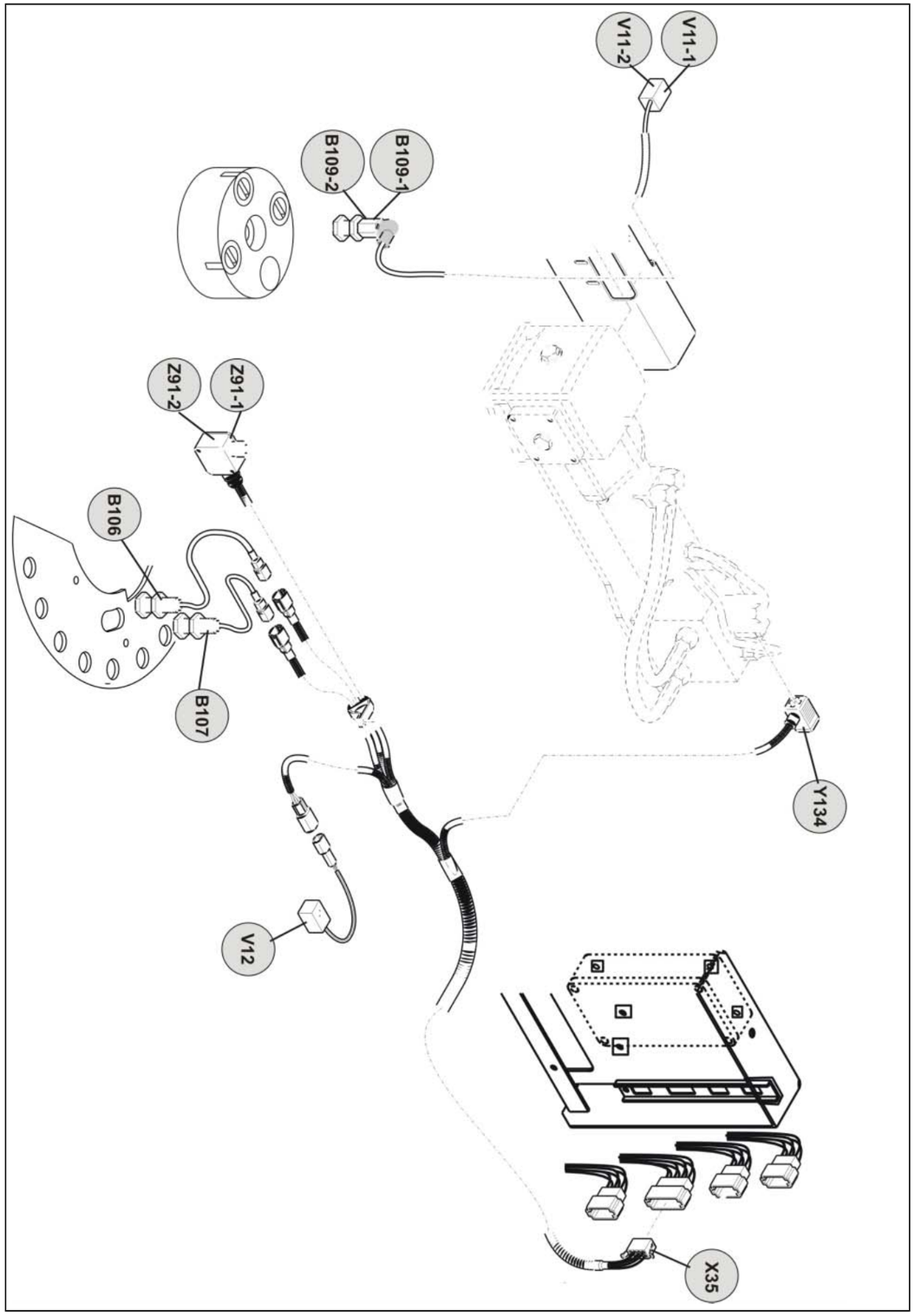
B106 Wrapping arm basic position sensor 21a
B107 Wrapping arm orbits sensor 21a
B109-1 Film break sensor 22a
B109-2 Film break sensor 22a

V11-1 Film break monitoring transmitter.....22a
V11-2 Film break monitoring transmitter.....22a
V12 Film break monitoring receiver.....22a

Y134 Wrapping arm backward solenoid coil 21a

Z91-1 Safety bow actual value switch 21a
Z91-2 Safety bow actual value switch 21a

Wiring loom M (UNIWRAP)



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0293 519.0
SYS-EL Rollant 240/250, Uniwrap
EN - 04.05 - NF
Printed in Germany