Applications in the range of protection class II and extra-low voltage for industry and LED technology

Application example



You therefore have the security of a clear separation of different applications without having to redo any incorrect connections. The color of the connectors indicates the links that belong together.

General

The two-pole connectors are based on the 3-pole variant, but with one pole not configured.

There are essentially two variants. One coding is specifically reserved for protection class II applications and is downwardly compatible with the 3-pole system with ground conductor (RST 20i3).

This makes it possible to transition from a system with earthing contact to a 2-pole system – but not the other way round!

The other version is aimed at applications in the extra-low voltage range, such as serial or parallel LED wiring, or at industrial applications with 24 V auxiliary power and AS-i. All connectors are mechanically coded. This means that only associated pairs of male and female can be connected with the correct polarity.

Coding

	tes visit the website at			Application	25	D V	Extra volt	
Assembly inst	ieland-electric.com. ructions and other technical inform al Data or in eShop.	ation can be found		Mechanical coding, for example	Protectio	n class II	LED seriell, e.g. 24V	LED paralle AS-i
Name	Description	Connection style	Strain relief housing	Connection points per pole	light gray	black	signa l brown	pebble gray
Connector	1 x cable entry	Screw Spring clamp	yes	1	\checkmark	\checkmark	\sim	\checkmark
Connector	2 x cable entry	Screw Spring clamp	yes	1 2	\checkmark	\checkmark	\checkmark	\checkmark
	Distribution block 1 I/3 0				\checkmark	\checkmark	\checkmark	\checkmark
Distribution	RST compact distribution unit/multi-distribution unit				\checkmark	\checkmark	\checkmark	on reques
units	Individual distribution box				on request	on request	on request	on reques
	Series distribution unit for power LEDs						\checkmark	
	M16 device connector, modular, straight				\checkmark	\checkmark	\checkmark	\checkmark
	M16 device connector, modular, angled 7°				$\overline{\mathbf{A}}$	$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\checkmark}$
Device	M25 device connector, standard				$\overline{\mathbf{A}}$	$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\checkmark}$
connectors	M20 device connector, standard				$\overline{\mathbf{v}}$	$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\checkmark}$
	M20 device connector, modular, angled				$\overline{\mathbf{v}}$	$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\checkmark}$
	M25 device connector, modular, angled				$\overline{\mathbf{v}}$	$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\checkmark}$
	Connection cable Male – Free end	pre- assembled	pre- assembled	pre- assembled	$\overline{\mathbf{v}}$	$\overline{\mathbf{v}}$	$\overline{\mathbf{A}}$	$\overline{\checkmark}$
	Connection cable Female – Free end	pre- assembled	pre- assembled	pre- assembled	$\overline{\mathbf{A}}$	\checkmark	\checkmark	\checkmark
Cable	Connection cable Male – Female	pre- assembled	pre- assembled	pre- assembled	$\overline{\mathbf{v}}$	$\overline{\checkmark}$	$\overline{\mathbf{A}}$	$\overline{\checkmark}$
assemblies	Connection cable Europ, conn, SK II – Female	pre- assembled	pre- assembled	pre- assembled	$\overline{}$	$\overline{\checkmark}$	$\overline{}$	$\overline{\checkmark}$
	Round cable	pre- assembled	pre- assembled	pre- assembled	$\overline{}$	$\overline{\checkmark}$	$\overline{}$	$\overline{\checkmark}$
	AS-i profile cable	pre- assembled	pre- assembled	pre- assembled				$\overline{\checkmark}$

Connectors, straight for cables Ø 6 – 10 mm and 10 –14 mm

remale c	connect	or						, SW27 ,	
Jnmounted v	vith cab l e g	land.						3W27	
		or insulation strip rules to be used.	Ø34,6			P	19.5		ca.82
				with spring	clamp connec	tion	with screw co	onnection ¹⁾	
				Wire rigid fine-stranded stranded	mm ² 0.5 - 2.5 0.5 - 1.5 0.75 - 1.5	Ferrules with ferrules with ferrules	Wire rigid fine-stranded stranded	$\frac{mm^2}{0.75 - 6.0^{21}}$	without ferrules without ferrules
pplication	Coding	Cable diameter in mm	Color		Part No.			Part No.	
Protection class II 250 V xtra-low volt. e.g LED serial, 24V	1,	Illumination cable 13.3x5.3 H05RNH2-F2 x 1.5 ² 6 - 10 AS-i profile cable	light gray black light gray black light gray black signal brown		96.021.0053.0 96.021.0053.1 96.021.0153.0 96.021.0153.1 96.021.0453.0 96.021.0453.1 96.021.0051.4 96.021.0951.4			06.021.4053.0 06.021.4053.1 06.021.4153.0 06.021.4153.1 06.021.4453.0 06.021.4453.1 06.021.4051.4 06.021.4051.4	
LED parallel, AS-i Male cor Jnmounted v device. See the Techn	with cable g	AS-i profile cable	pebble gray pebble gray		96.021.0050.8 96.021.0950.8			6.021.4050.8 6.021.4950.8 SW27	
LED parallel, AS-i Vlale cor Jnmounted v device. See the Techn	with cable g	AS-i profile cable	pebble gray			tion		6.021.4950.8	.79,1
LED parallel, AS-1 Vlale cor Jnmounted v levice. See the Techn	with cable g	AS-i profile cable	pebble gray		96.021.0950.8	ction Ferrules with ferrules with ferrules	9 9 9 9	6.021.4950.8	1.67
LED parallel, AS- Vale cor Jnmounted v device. See the Techr engths as we	with cable g	AS-i profile cable	pebble gray	with spring of Wire rigid fine-stranded	96.021.0950.8	Ferrules with ferrules with	with screw ca Wire rigid fine-stranded	5W27	without ferrules without
device. See the Techi	with cable g nical Data f	AS-i profile cable	pebble gray	with spring of Wire rigid fine-stranded stranded	96.021.0950.8	Ferrules with ferrules with	with screw co	5 SW27 SW27 SW27 SW27 SW27 SW27 SW27 SW27	without ferrules without

¹¹ With wire protection available on request ²¹ With 6.0 mm² wires, the pull and bending forces at the connector must be taken into consideration and compensated using suitable measures if required. See also chapter on Technical Data and eShop.

Connectors, angled 90° for cables Ø 6 – 10 mm and 10 –14 mm

Female connector	ø34,6		55,5
Unmounted with cable gland. 90° angle.			
See the Technical Data for insulation strip lengths as well as the ferrules to be used.			SW27
		with spring clamp connection	with screw connection ¹⁾
		Wire mm² Ferrules rigid $0.5 - 2.5$	Wire mm² rigid .75 - 6.0° without ferrules stranded without .75 - 6.0° without ferrules
Application Coding Cable diameter in mm	Color	Part No.	Part No.
Protection class II 250 V 6 - 10 Protection class II 250 V Image: Control of the state of	light gray black light gray black signal brown signal brown pebble gray pebble gray	96.023.0053.0 96.023.0053.1 96.023.0153.1 96.023.0453.0 96.023.0453.1 96.023.0453.1 96.023.0951.4 96.023.0950.8 96.023.0950.8	96.023.4053.0 96.023.4053.1 96.023.4153.1 96.023.4453.0 96.023.4453.1 96.023.4453.1 96.023.4051.4 96.023.4051.4 96.023.4950.8 96.023.4950.8
		with spring clamp connection	with screw connection ¹⁾
		$\begin{tabular}{ c c c c c } \hline Wire & mm^2 & Ferrules \\ \hline rigid & 0.5 & -2.5 \\ \hline fine-stranded & 0.5 & -1.5 & with \\ \hline ferrules \\ \hline stranded & 0.75 - 1.5 & with \\ \hline ferrules \\ \hline errules \\ \hline errule$	$\begin{tabular}{ c c c c c c c } \hline Wire & mm^2 & & & & \\ \hline rigid & & & & \\ fine-stranded & & & & & \\ \hline fine-stranded & & & & & \\ \hline stranded & & & & & & \\ \hline stranded & & & & & & \\ \hline errules & & \\ \hline errules & & \\ \hline e$
Application Coding Cable diameter in mm	Color	Part No.	Part No.
Protection class II 250 V Image: Constraint of the second se	light gray black light gray black light gray black	96.024.0053.0 96.024.0053.1 96.024.0153.0 96.024.0153.1 96.024.0453.0 96.024.0453.1	96.024.4053.0 96.024.4053.1 96.024.4153.0 96.024.4153.1 96.024.4453.0 96.024.4453.1
Extra-low volt. e.g. 0 2, 1 6 - 10 LED serial, 24V AS-i profile cable Extra-low volt. e.g. 0 -, + Round cable 6 - 10 LED parallel, AS-i profile cable	signal brown signal brown pebble gray pebble gray	96.024.0051.4 96.024.0951.4 96.024.0050.8 96.024.0950.8	96.024.4051.4 96.024.4951.4 96.024.4050.8 96.024.4950.8

¹¹ With wire protection available on request ²¹ With 6.0 mm² wires, the pull and bending forces at the connector must be taken into consideration and compensated using suitable measures if required. See also chapter on Technical Data and eShop.

Splitter connector, straight for cables Ø 6 – 10 mm and 10 –14 mm

remale c	onnec	tor						SW27	-1 <u>- S₩27</u> -1	
Unmounted w	ith cab l e	gland.								
		for insulation stri rrules to be used		59			1	co.95,9		
					with spring o	amp conn	ection	with screw co	nnection ¹⁾	
					Wire	mm ²	Ferrules	Wire	mm ²	
					rigid	0.5 - 2.5	with	rigid	0.75 0.5	without
					fine-stranded	0.5 - 1.5	ferrules	fine-stranded	0.75 - 2.5	ferrules
					stranded	0.75 – 1.5	with ferrules	stranded		without ferrules
\pplication	Coding	Cabl	e diameter in mm	Color		Part No.			Part No.	
			6 - 10	light gray		96.021.0253.			6.021.4253	
Destantion			0 10	black		96.021.0253.			6.021.4253	
Protection		N	10 - 14	light gray black		96.021.0353. 96.021.0353.			6.021.4353 6.021.4353	
class II	- W					on request			on request	
	L,		ation cable 13.3x5.3	light gray						
class II 250 V			H05RNH2-F2 x 1.5 ²	black		on request	4		on request	
class II										.4

Mounting plate for splitter connectors





φ

Color	Part No.
gray	01.006.1553.0
■ black	01.006.1553.1

[•] With wire protection available on request

M25 device connector straight, standard



RST[®] CLASSIC

M16 device connector straight, modular



¹⁾ With wire protection available on request

M16 device connector angled 7°, modular

Female co	onnector			SW 24
	ning guaranteed due to flattened ing with screws from inside. evice.			
	ical Data for insulation strip I as the ferrules to be used.	<i>ø</i> 34		19.4 co.87
	wahlweise Verdrehsicherung		with spring clamp connection	with screw connection ¹⁾
	optional protection against twisting t max.=81	<u>nm</u>	Wire mm² Ferrules rigid 0.5 -2.5	Wire mm² rigid mr² fine-stranded 0.75-6.0 stranded without formulas ferrules stranded 1 Term. poles 1 Thread M16 x 1.5 Gland inside
pplication	Coding	Color	Part No.	Part No.
250V	Protection class II 6 L, N	gray black signal brown	96.025.2153.0 96.025.2153.1 96.025.2151.4	96.025.6153.0 96.025.6153.1 96.025.6151.4
Extra-low voltage	e.g. LED serial, 24V e.g. LED parallel, AS-i nector	pebble gray		96.025.6150.8
Extra-low voltage Male con Correct positio hread. Fasteni With locking do See the Techni	e.g. LED parallel, AS-i +, -	pebble gray	,,7 ,7	96.025.6150.8
Extra-low voltage Male con Correct positio thread. Fasteni With locking do See the Techni	e.g. LED parallel, AS-i (+, -) nector ning guaranteed due to flattened ing with screws from inside. evice. ical Data for insulation strip I as the ferrules to be used.		vith spring clamp connection	
Extra-low voltage Male con Correct positio thread. Fasteni With locking do See the Techni	e.g. LED parallel, AS-i (+, -) nector nector ning guaranteed due to flattened ing with screws from inside. evice. ical Data for insulation strip I as the ferrules to be used.	ø34		SW24 @
Extra-low voltage Male con Correct positio thread. Fasteni With locking do See the Techni engths as well	e.g. LED parallel, AS-i +, - nector nector ming guaranteed due to flattened ing with screws from inside. evice. ical Data for insulation strip I as the ferrules to be used. wahtweise Verdrehsicherung optional protection against twisting tmax.=81	ø34	with spring clamp connection Wire mm² rigid 0.5 fine-stranded 0.5 stranded 0.75 stranded 0.75 Term, poles 2 Thread M16 x 1.5	SW24 SW24 SW24 SW24 SW24 Standard Stranded Term, poles 1 Thread M16 x 1.5
Extra-low voltage Male con Correct positio thread. Fasteni With locking do See the Techni	e.g. LED parallel, AS-i +, - nector ning guaranteed due to flattened ing with screws from inside. evice. ical Data for insulation strip I as the ferrules to be used. wahtweise Verdrehsicherung optional protection against twisting t max.=8i Ø20,4-a.2	<u>m</u>	with spring clamp connectionWiremm²Ferrulesrigid $0.5 - 2.5$ itfine-stranded $0.5 - 1.5$ with ferrulesstranded $0.75 - 1.5$ with ferrulesTerm, poles2ThreadThreadM16 x 1.5Gland	SW24 Image: Constraint of the series of

M20 device connector straight, modular



) With wire protection available on request

M20 device connector angled 90°, modular



M25 device connector angled 90°, modular



) With wire protection available on request

Accessories – Cover pieces

Cover pieces

for female





not captive against loss	for female	for male
Color	Part No.	Part No.
light grey	Z5.564.4553.0	05.564.4453.0
■ black	Z5.564.4553.1	05.564.4453.1

For the safe closure of female and male connectors. With mounting strap for snapping onto plug connectors and device connectors

for male



for female



for male



captive against loss	for female	for male
Color	Part No.	Part No.
light grey	99.413.6205.2	99.415.6205.2
black	99.414.6205.2	99.416.6205.2

RST® CLASSIC

Cable 2 x 1.5 mm²; 16 A

Rated values		Pull relief	shrinkage tube
Wire ends (open cable end)	ultrason, welded	Interlock	integrated
Sheath strip length (open cable end)	35 mm	Color cable	black
Wire strip length (open cable end)	9 mm	Color shrinkage tube	black

Connection cables female – male

			Protection class II 250V	Extra-low voltage e.g. LED serial, 24V	Extra-low voltage e.g LED parallel, AS-i
Cable		Length m	Part No.	Part No.	Part No.
		1	96.222.1000.1	96.222.1002.4	on request
		2	96.222.2000.1	96.222.2002.4	
PVC ca		3	96.222.3000.1	96.222.3002.4	
	-F	4	96.222.4000.1	96.222.4002.4	
		5	96.222.5000.1	96.222.5002.4	
containi	ng halogen	6	96.222.6000.1	96.222.6002.4	
		7	96.222.7000.1	96.222.7002.4	
		8	96.222.8000.1	96.222.8002.4	
Cable		Length m	Part No.	Part No.	Part No.
		1	96.222.1030.1	96.222.1032.4	on request
/i/		2	96.222.2030.1	96.222.2032.4	
Rubber	-sheathed cable	3	96.222.3030.1	96.222.3032.4	
HO7RN	-F	4	96.222.4030.1	96.222.4032.4	
		5	96,222,5030,1	96.222.5032.4	
containi	ng halogen	6	96.222.6030.1	96.222.6032.4	
	3	7	96.222.7030.1	96.222.7032.4	
		8	96.222.8030.1	96.222.8032.4	
		0	00.222.0000.1	00.222.0002.1	



Cable 2 x 1.5 mm²; 16 A



Power Connection cable

Male: european standard (SKII) – female: **RST**®



		Protection class II 250V Color: black
Cable	Length m	Part No
Rubber-sheathed cable	1.5	99.708.0000.7
H07RN-F	2.5	99.709.0000.7

Cable 2 x 1.5 mm²; 16 A

Rated values			Pull re	lief	shrinkage tube
Wire ends	(open cable end)	ultrason. welded	Interlo	ock	integrated
Sheath strip length	(open cable end)	35 mm	Color	cable	gray
Wire strip length	(open cable end)	9 mm	Color	shrinkage tube	black





Cable 2 x 1.5 mm²; 16 A



Cable 2 x 2.5 mm²; 20 A

Rated values			Pull relief	shrinkage tube
Wire ends (op	pen cable end)	ultrason. welded	Interlock	integrated
Sheath strip length (op	pen cable end)	35 mm	Color cable	gray
Wire strip length (op	pen cable end)	9 mm	Color shrinkage tube	black





Cable 2 x 2.5 mm²; 20 A



Distribution block

Distribution block 1I/30 (parallel connection), Interlock for protection class II, AS-i or LEDs





with fastening option

Color	Application	Pole marking	Input	Outputs	Part No.
black	250 V	L, N	1	2	96.020.0153.1
light grey	250 V	L, N	1	2	96.020.0153.0
signal brown	Extra-low voltage	1, 2	1	2	96.020.0151.4
pebble gray	Extra-low voltage	+, -	1	2	96.020.0150.8

Yes





without fastening option

Color	Application	Pole marking	Input	Outputs	Part No.
black	250 V	L, N	1	2	96.020.0253.1
light grey	250 V	L, N	1	2	96.020.0253.0
🔳 signal brown	Extra-low voltage	1, 2	1	2	96.020.0251.4
pebble gray	Extra-low voltage	+, -	1	2	96.020.0250.8

Distribution block 1 I/3 O (series connection) for power LEDs





Circuit diagram

ſ

with fastening option

Color	Application	Pole marking	Input	Outputs	Part No.
signal brown	Extra-low voltage	1, 2			99.910.0000.7







For jumpering od unused slots on the series distribution unit

e.g. circuit diagrams



Distribution unit

RST compact dis Dimensions	tribution unit 11/20 104 x 162 x 57.2 mm	Fitted as required with Pre-wired with Mounting option	M25 device connectors 2-pole 2.5 mm² (halogen free) Yes		
	Circuit diagram	Color Dlack 2 2 2	Input 1, RST20i2	Outputs 2, RST20i2	Part No. 99.942.0000.0
RST compact dis	tribution unit 11/30 104 x 162 x 57.2 mm	Fitted as required with Pre-wired with Mounting option	M25 device connectors 2-pole 2.5 mm² (halogen free) Yes		
	Circuit diagram	Color gray black	Input 1, RST20i2 1, RST20i2	Outputs 3, RST20i2 3, RST20i2	Part No. 99.990.0000.7 Upon request
RST multi distrib	ution unit 11/70 104 x 162 x 96 mm	Fitted as required with Pre-wired with Fuses	M25 device connectors 2-pole 2,5 mm² (halogen free) 6.3 or 10A can be integrated		
	Circuit diagram	Color brown black	Input 1, RST20i2 1, RST20i2	Outputs 7, RST20i2 7, RST20i2	Part No. 99.946.0000.7 99.988.0000.7