

LAMTEC

Flame Monitoring



Flame monitoring device F152



Flame scanner FFS07 (Ex)



Flame scanner FFS08

Standards and Directives (under approval):

- *DIN EN 298:2012*
- *DIN EN 230:2005*
- *DIN EN 60730-2-5:2011*
- *DIN EN 50156:2005, section 10.5*
- *DIN EN 746-2:2011 (Safety requirements for industrial thermoprocessing equipment)*
- *97/23/EG (Pressure equipment directive)*
- *2009/142/EG (Gas equipment directive)*
- *2006/95/EG (Low voltage directive)*
- *2004/108/EG (EMV-directive)*
- *DIN EN 61508:2011 Ed.2 Teil 2 (Requirements SIL 2)*
- *DIN EN 60730-1:2012*
- *DIN EN 60079-0:2012, -15:2011 (Explosive protection)*

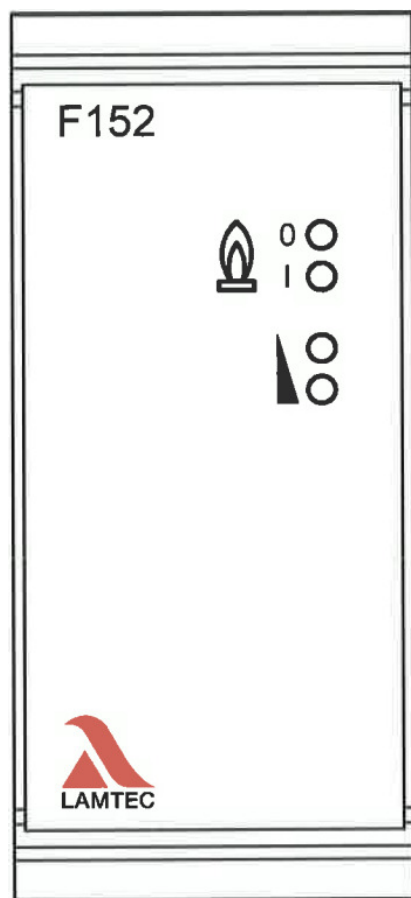
- › Plug-in module for DIN rail mounting
- › Two- electronic channel system with self-monitoring for fail safe operation and supervision
- › Suppression of strange light sources such as lamps, power frequency radiation sources or direct light, such as solar radiation
- › Digital flame frequency evaluation in the range 10 to 200 Hz
- › Status display by LED's
- › Measuring output for intensity 0-20 mA
- › UV and IR flame detectors of series FFS07 ... and FFS08...

Areas of application

- Monitoring of burner flames without complicate selection tasks
- Single and multi-fuel burners in heating stations and process industry

Selection criteria for flame scanners

Sensor type	Spectral range	Application / fuel
FFS07 / 08 UV-1	260 ... 400 nm	Oil, Gas
FFS07 / 08 UV-4	215 ... 360 nm	Oil, Gas, (Specialty gases such as refinery and blast furnace gases)
FFS07 / 08 IR-1	1000 ... 2500 nm	Oil, gas, firing with strong flue gas recirculation, yellow colored waste gases without UV- radiation

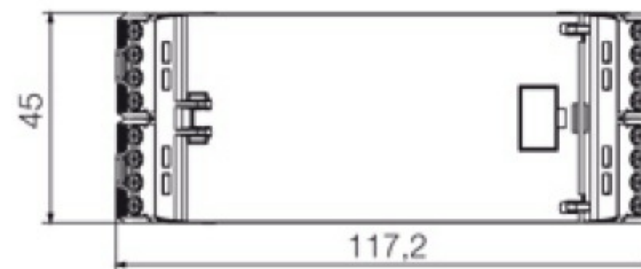
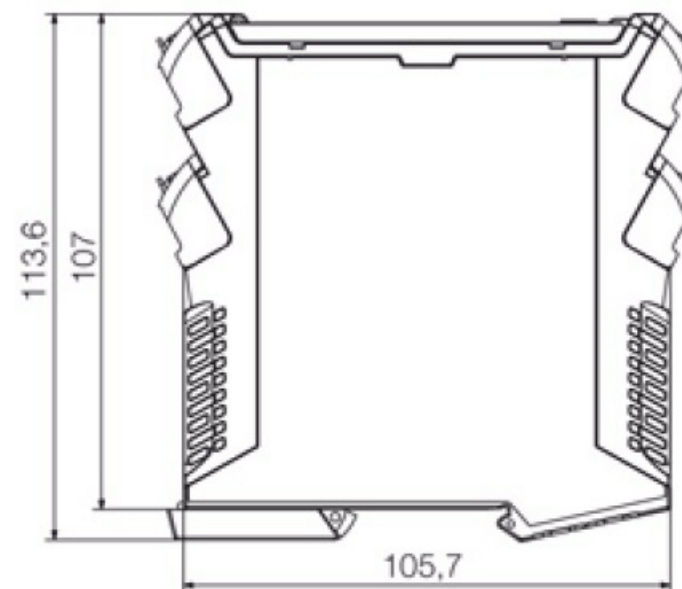


LED RT – Flame OFF

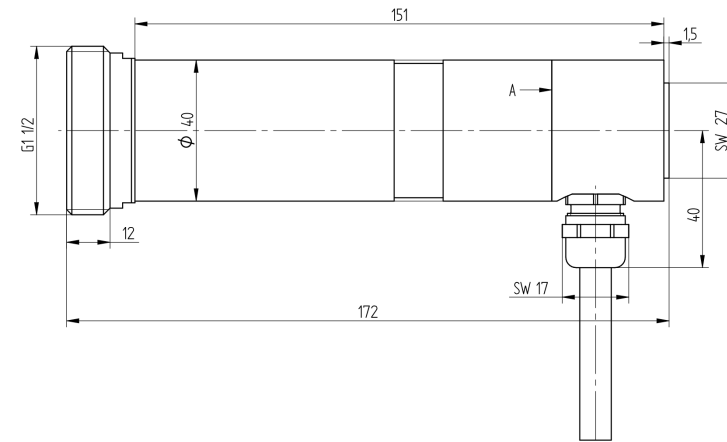
LED GN – Flame ON

LED YE – Flame intensity

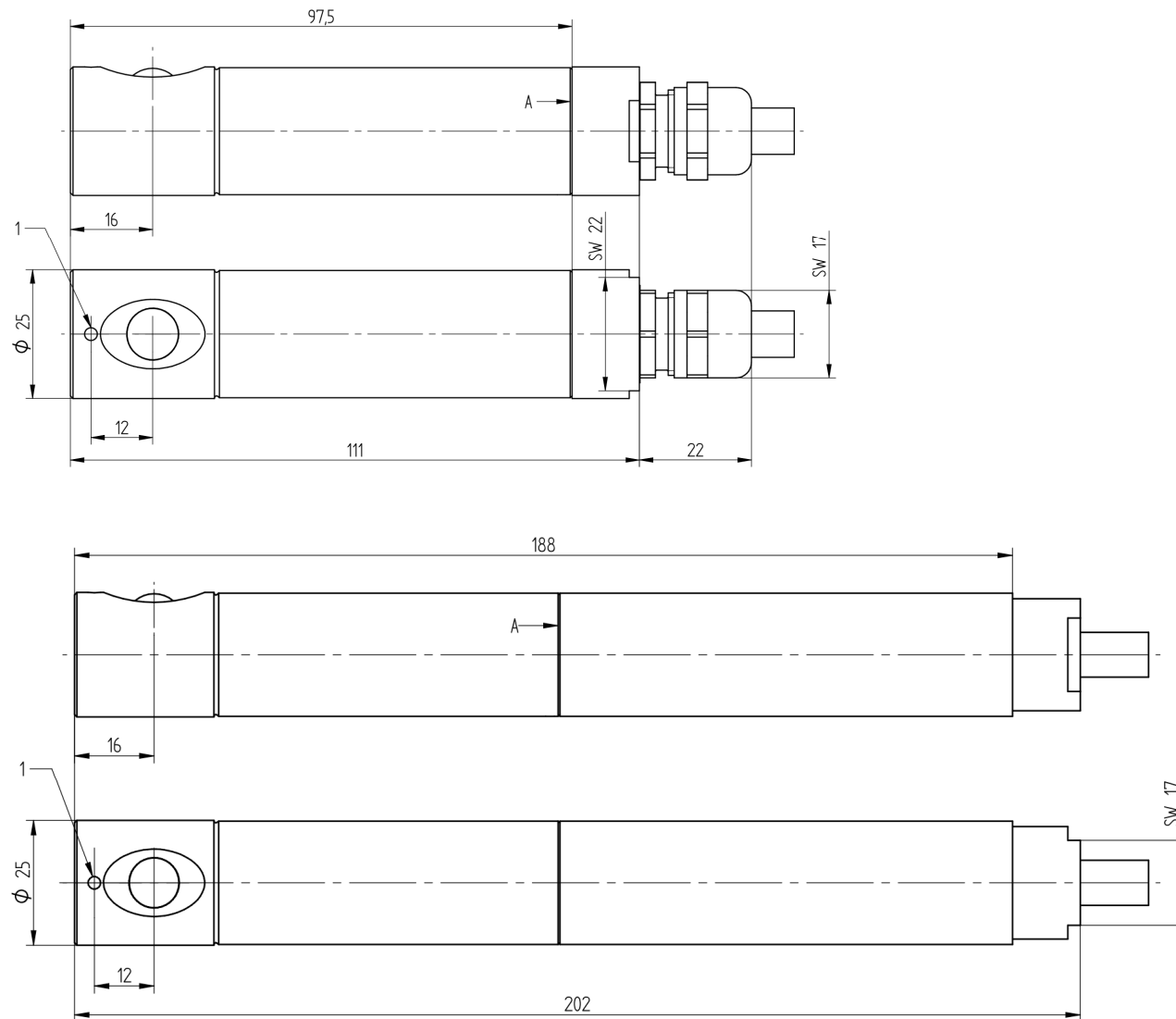
LED YE – Flame intensity 100%



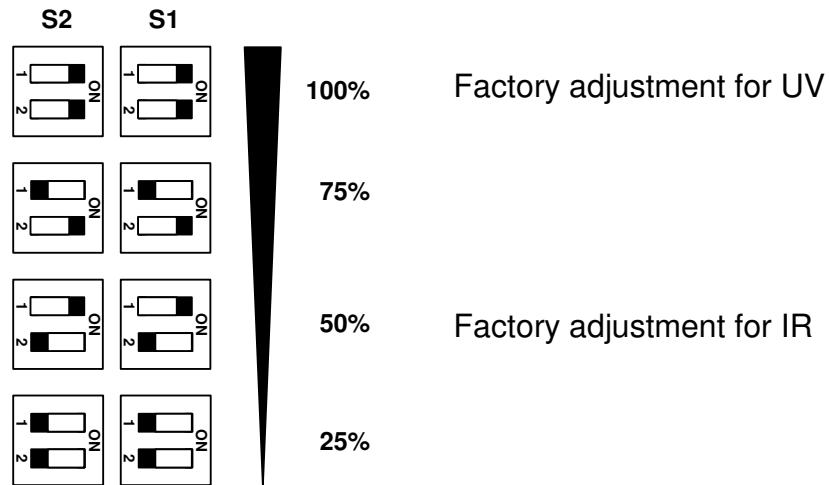
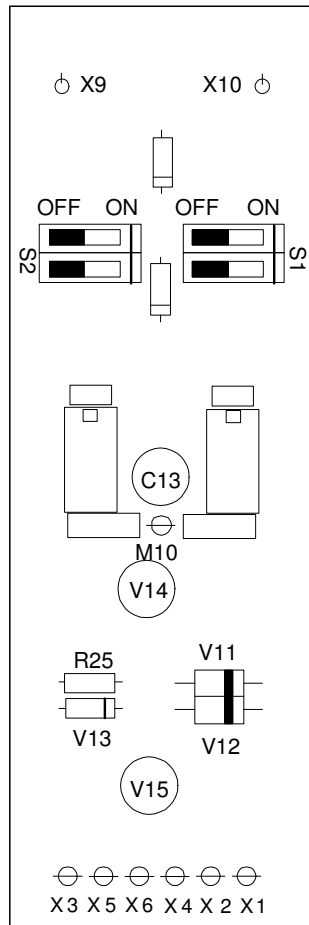
LAMTEC Meß- und Regeltechnik für Feuerungen GmbH & Co. KG



Flame scanner FFS08



Sensitivity

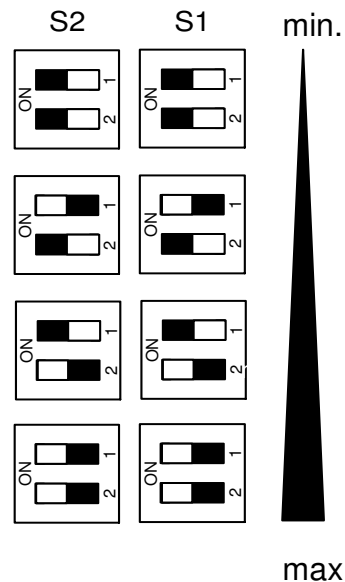
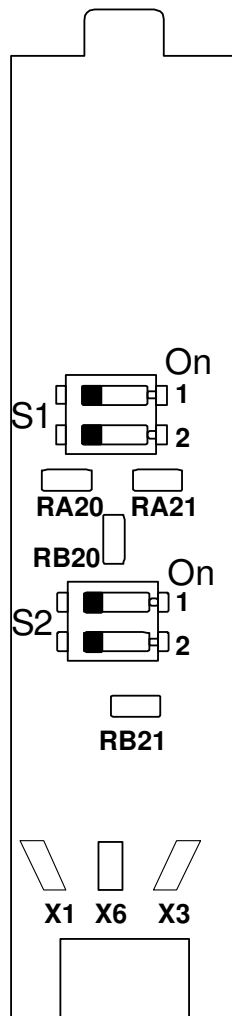


The adjustment is made to the switches S1 and S2, accessible after opening of the sensor housing

Measurable sensor signals:

- IR-scanner >10mV AC
- UV-scanner >25mV AC

Sensitivity



Measurable sensor signals:

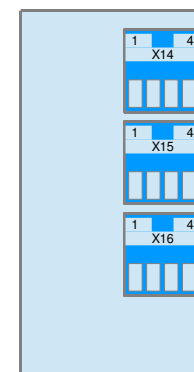
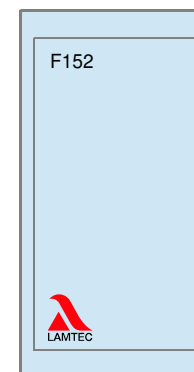
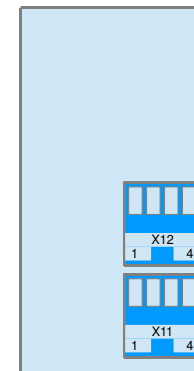
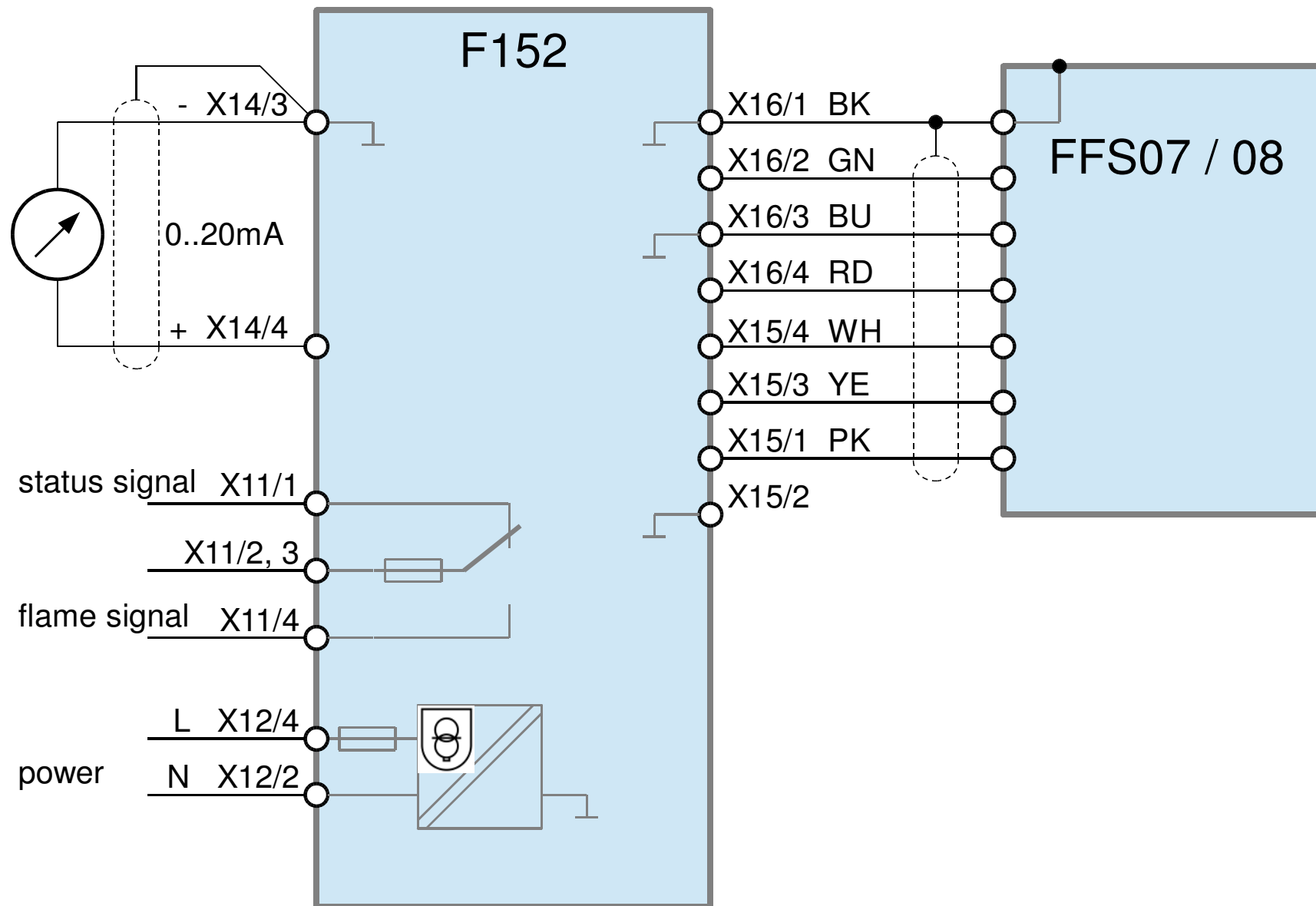
- IR-scanner >10mV AC
- UV-scanner >25mV AC

The adjustment is made to the switches S1 and S2, accessible after opening of the sensor housing.

NOTICE!

The FFS08 UV scanners don't have this sensitivity adjustment. The optimization is carried out only with the optimum focus to the flame. For optimization is to be used the measurable voltage output signal at a measuring instrument.

Wiring Diagram



Ordering information for flame monitoring device F152



Type	Product	Order-no.
F152	Flame monitoring device	659G0501

Ordering informations for flame scanner FFS07 (IR)



Type	Spectral range	Choice
FFS07 IR-1	IR-spectral range 1.000 – 2.500 nm 3m cable without plug	659D21-10 0 3 0
	3m cable with plug	659D21-10 0 3 Ste
FFS07 IR-1 Ex	3m cable without plug	659D22-10 0 3 0
Holding devices acc. to product overview, publication DLT7660-12-bDE-002		

Connection-/extension cable, length 3 m ¹⁾ **659 R 3112**

Connection-/extension cable, length 5 m ¹⁾ **659 R 3115**

Connection-/extension cable, length 10 m ¹⁾ **659 R 3114**

¹⁾ Only for scanner variants FFS07 and FFS08 with plug

Ordering informations for flame scanner FFS07 (UV)

Type	Spectral range	Choice
FFS07 UV-1	UV-spectral range 260 – 400 nm 3m cable without plug	659D21-01 0 3 0
	3m cable with plug	659D21-01 0 3 Ste
FFS07 UV-1 Ex	3m cable without plug	659D22-01 0 3 0
FFS07 UV-4	UV-spectral range 215 – 360 nm 3m cable with plug	659D21-04 0 3 0
	3m cable with plug	659D21-04 0 3 Ste
FFS07 UV-4 Ex	3m cable without plug	659D22-04 0 3 0
Holding devices acc. to product overview, publication DLT7660-12-bDE-002		

Connection-/extension cable, length 3 m ¹⁾ **659 R 3112**

Connection-/extension cable, length 5 m ¹⁾ **659 R 3115**

Connection-/extension cable, length 10 m ¹⁾ **659 R 3114**

¹⁾ Only for scanner variants FFS07 and FFS08 with plug

Ordering informations for flame scanner FFS08

Type	Spectral range	Choice
FFS08 IR-1	IR-spectral range 1.000 – 2.500 nm 2m cable without plug	659D31-10 0 2 0
	2m cable with plug	659D31-10 0 2 Ste
FFS08 UV-1	UV-spectral range 260 – 400 nm 2m cable without plug	659D31-01 0 2 0
	2m cable with plug	659D31-01 0 2 Ste
FFS08 UV-4	UV-spectral range 215 – 360 nm 2m cable without plug	659D31-04 0 2 0
	2m cable with plug	659D31-04 0 2 Ste
Holding devices acc. to product overview, publication DLT7660-12-bDE-002		

Connection-/extension cable, length 3 m ¹⁾ **659 R 3112**

Connection-/extension cable, length 5 m ¹⁾ **659 R 3115**

Connection-/extension cable, length 10 m ¹⁾ **659 R 3114**

¹⁾ Only for scanner variants FFS07 and FFS08 with plug



Thank you for your attention

Questions?

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