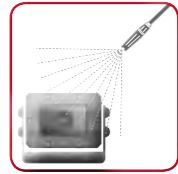


## Camera monitor systems

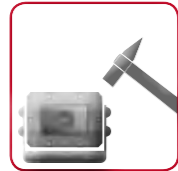




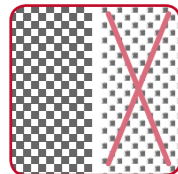
## Why Motec Camera monitor systems?



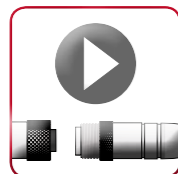
High-pressure cleaning resistant housings, IP69K.



Perfect resistance against shocks and vibrations by locking all camera components with industrial glue.



Digital technology for high image quality.



Plug and Play – Modular usage of all Motec products possible.



Within 24 hours a replacement device can be dispatched.



For further Information and technical advice please contact your local AGCO dealer!

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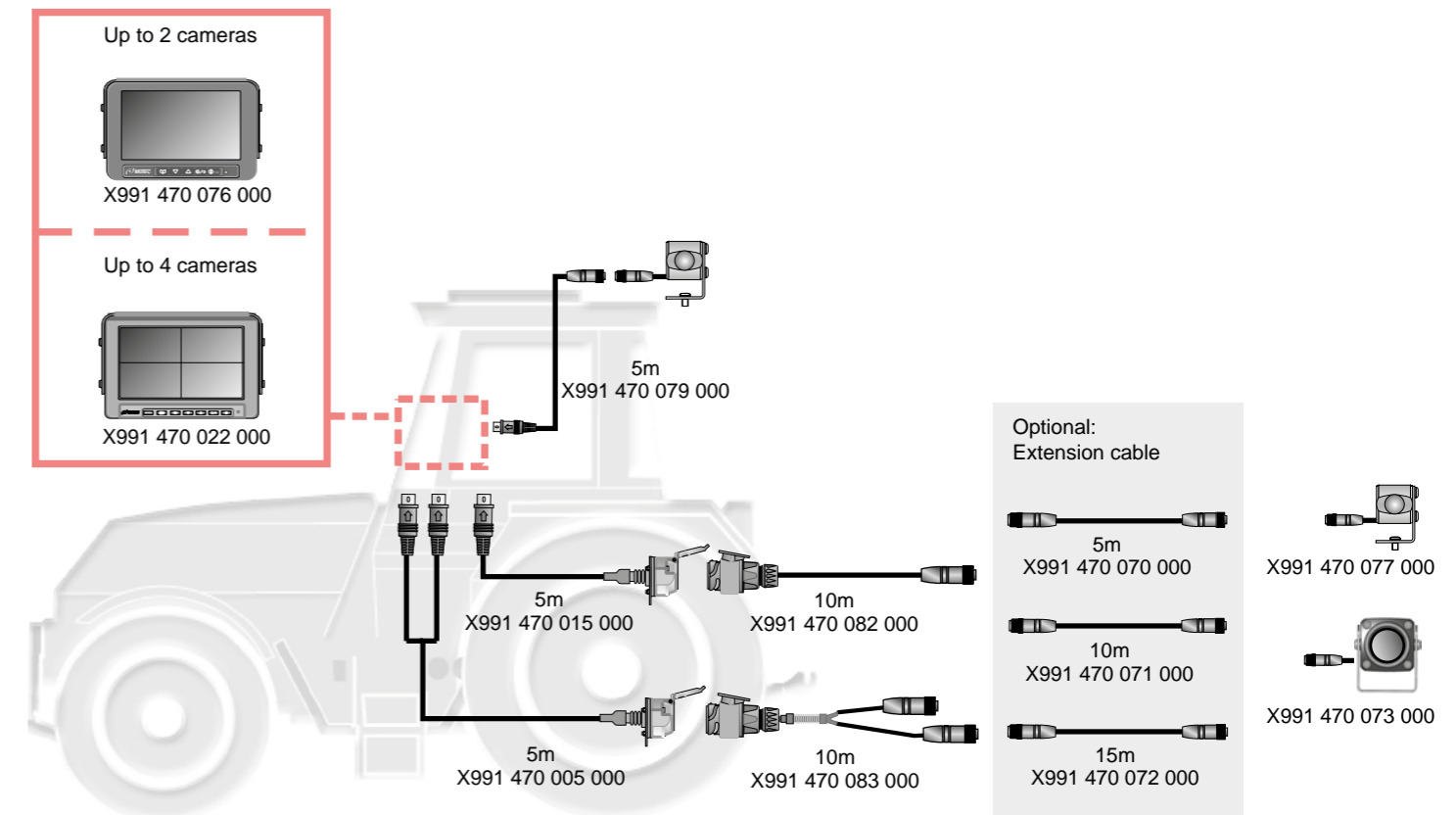
## News

The new robust 5 pin M12 connectors provide a more reliable signal transmission.



## Camera monitor systems for tractors with trailer/implement

Cameras support farmers during their work, both with the manoeuvring of large machinery by greatly increasing visibility and supporting safe operating practises.



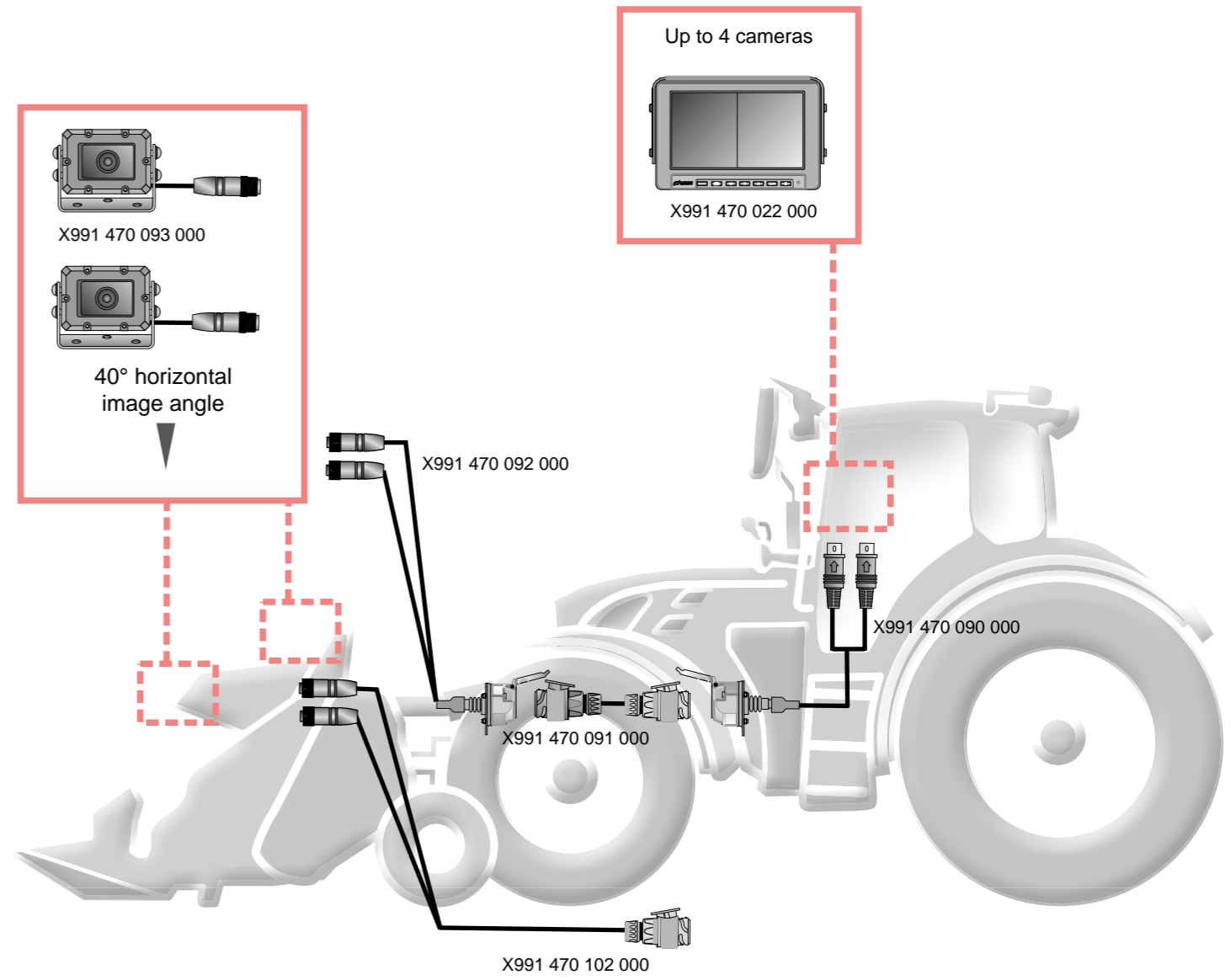
For mounting onto a tractor	Monitor	X991 470 076 000
	5 m Cable	X991 470 079 000
	Camera	X991 470 077 000
For mounting 1 camera to the implement or trailer	Monitor	X991 470 076 000
	5 m Cable	X991 470 015 000
	10 m Cable	X991 470 082 000
	Camera	X991 470 077 000
For mounting 2 cameras to the implement or trailer	Monitor	X991 470 022 000
	5 m Cable	X991 470 005 000
	10 m Cable	X991 470 083 000
	Camera	X991 470 077 000



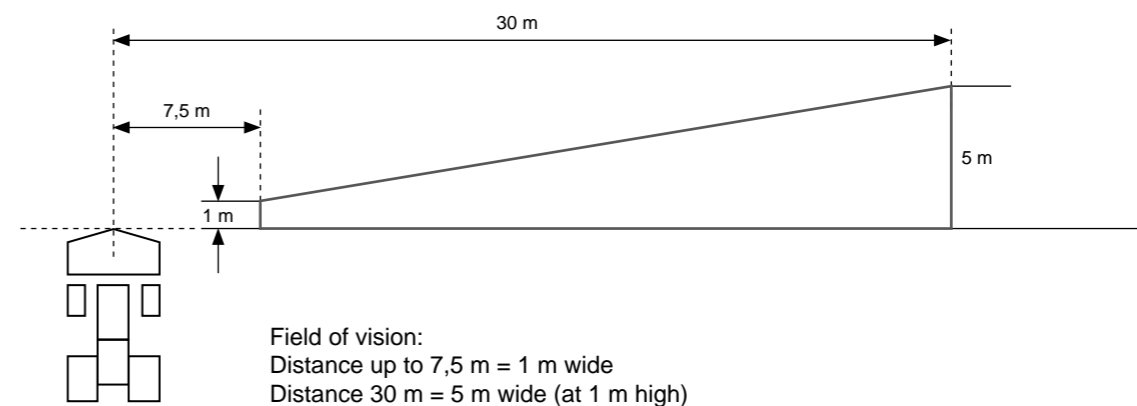
# Camera monitor systems for front implements

## Systems for front implements

German law (Austria and Switzerland similar) prescribes that in case of >3.5 m between steering wheel and front end of implement, the restricted visibility must be compensated by either a guide or a suitable camera system. The system shown has been tested and certified by the DLG (German Agricultural Society).



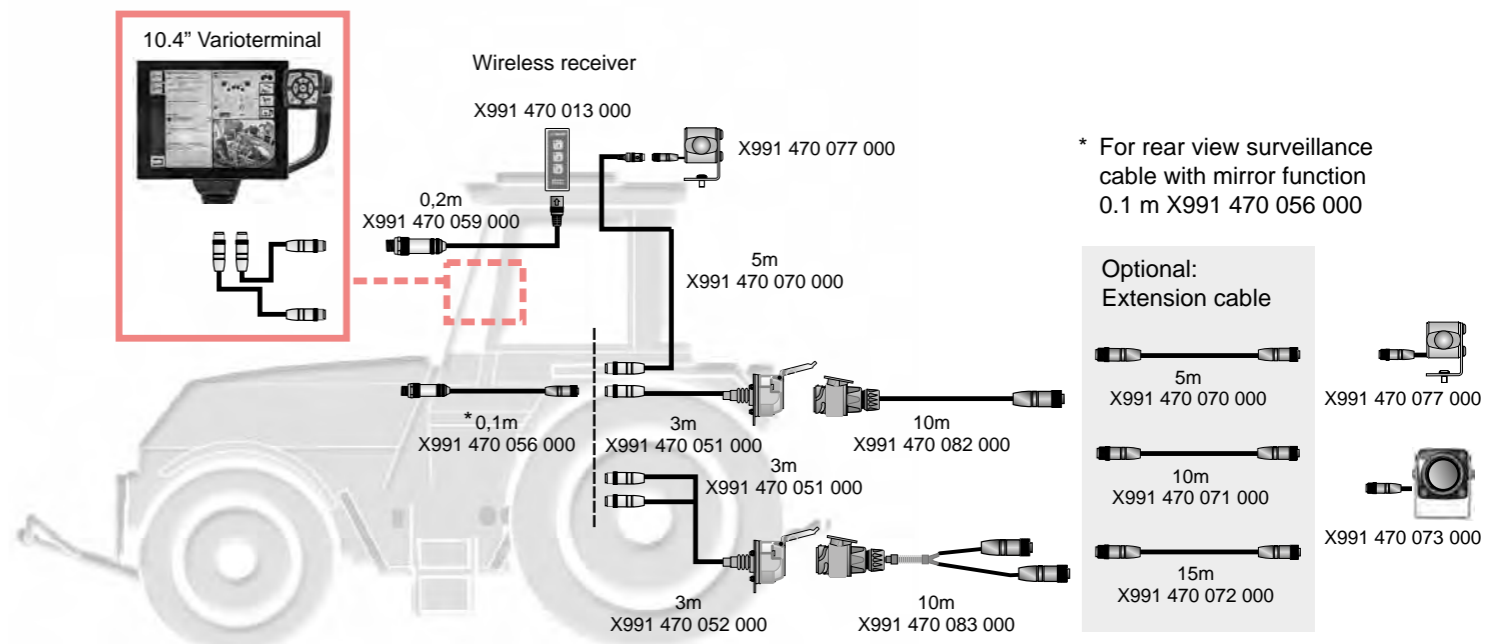
Cable run with 1 disconnecting point	X991 470 102 000	-/-	X991 470 090 000
Cable run with 2 disconnecting points	X991 470 092 000	X991 470 091 000	X991 470 090 000





# Camera systems for 10.4" Varioterminal

The 10.4" Varioterminal uses 2 video inputs installed at the armrest and to which 2 cameras can be easily connected.



### Small cable – huge effect!

If the cameras are facing rearward, the image needs to be flipped to achieve the effect of a rear view mirror, which can be done by using the short cable X991 470 056 000.

For mounting onto a tractor	5 m Cable Camera	X991 470 070 000 X991 470 077 000
For mounting 1 camera to the implement or trailer	3 m Cable 10 m Cable Camera	X991 470 051 000 X991 470 082 000 X991 470 077 000
For mounting 2 cameras to the implement or trailer	3 m Cable 10 m Cable Camera	X991 470 052 000 X991 470 083 000 X991 470 077 000



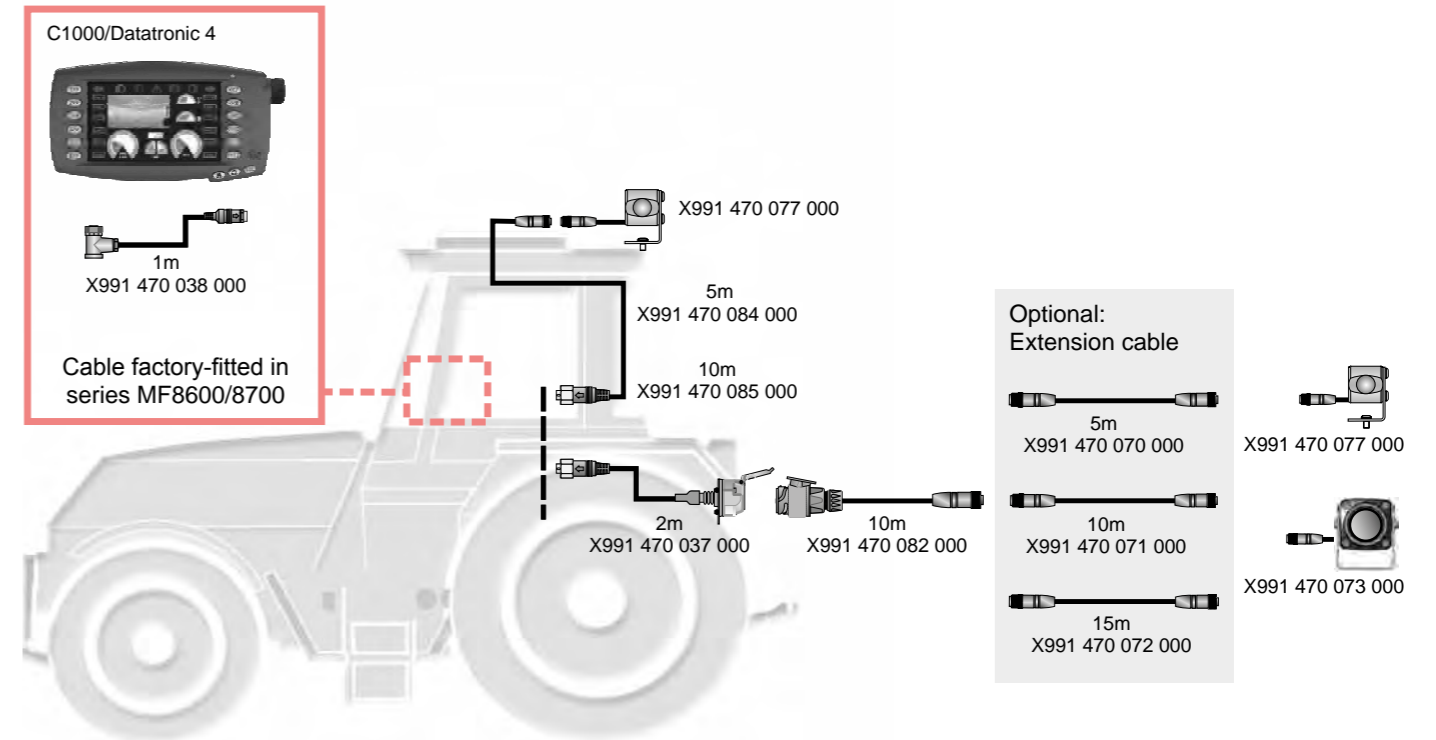


## Camera systems for C1000/Datatronic 4 terminal

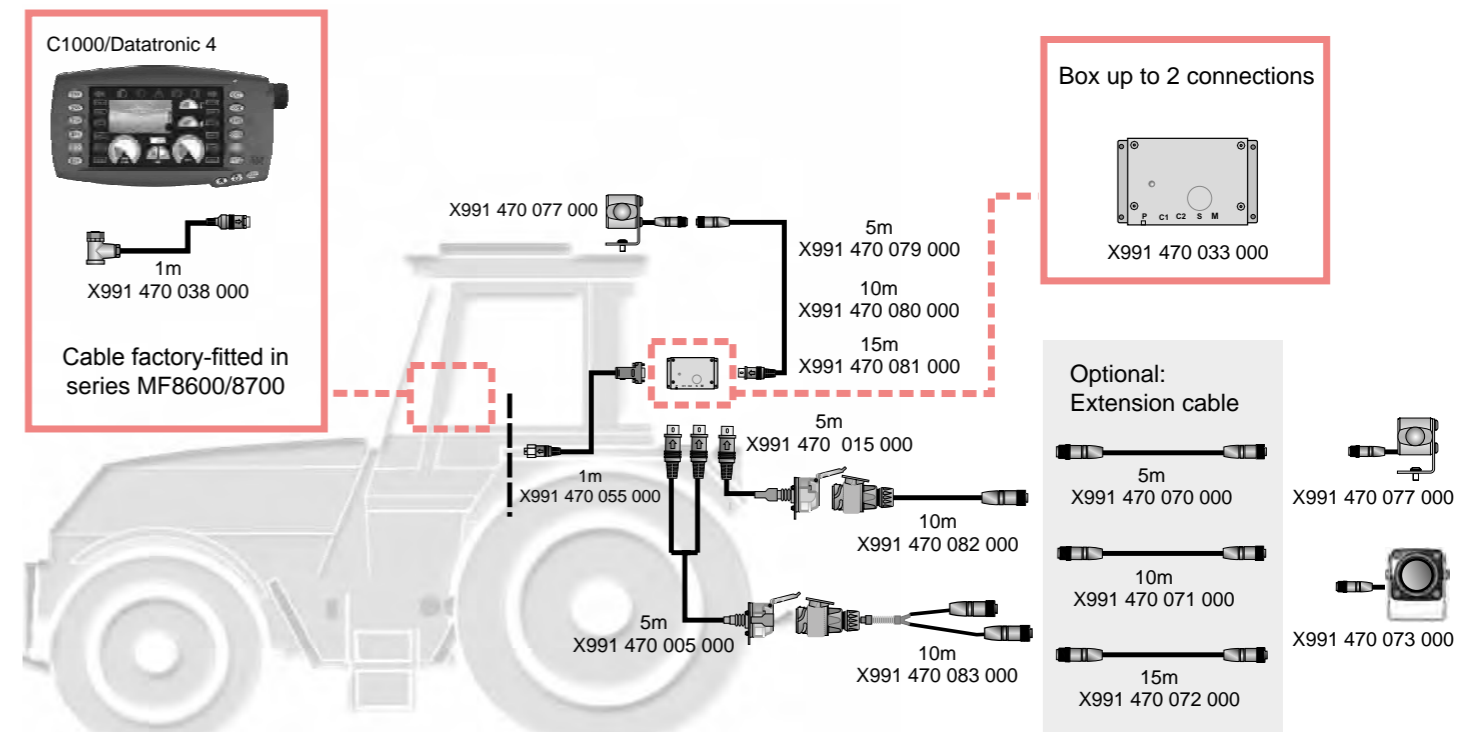
The Datatronic 4 terminal uses 1 video input. If using a switch box, 2 cameras can be connected. In order to monitor the area behind the vehicle, a simple push of the button in the terminal menu lets you mirror the camera image.



For the connection of 1 camera either on the tractor or on the trailer



For the connection of 2 cameras: either 1 camera on the tractor and 1 camera on the trailer or 2 cameras on the trailer





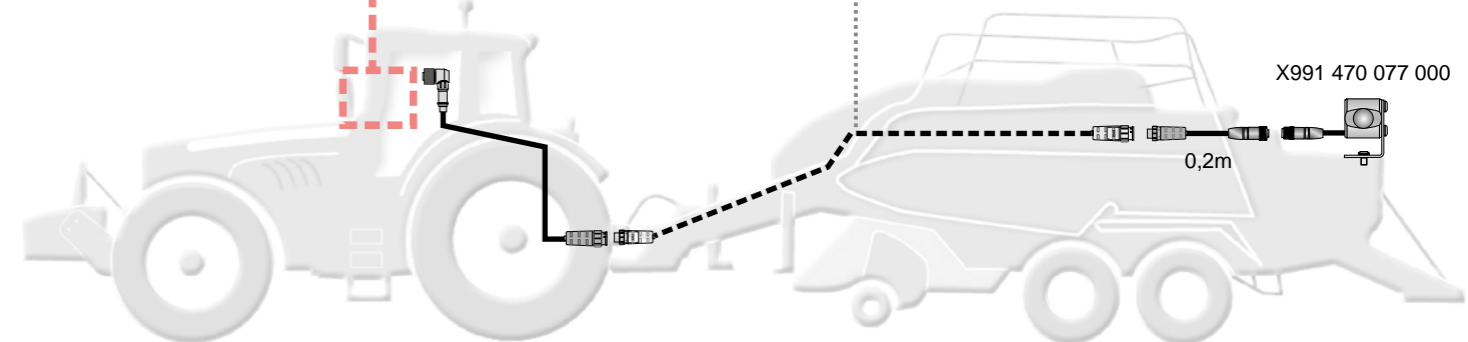
## Camera systems for large square baler

Square balers use a factory-installed cable. Using an appropriate adapter cable it is quick and easy to connect a camera. Now you are able to monitor bale output at any time.



C1000/Datatronic 4

Connecting cables pre-installed in the baler's harness



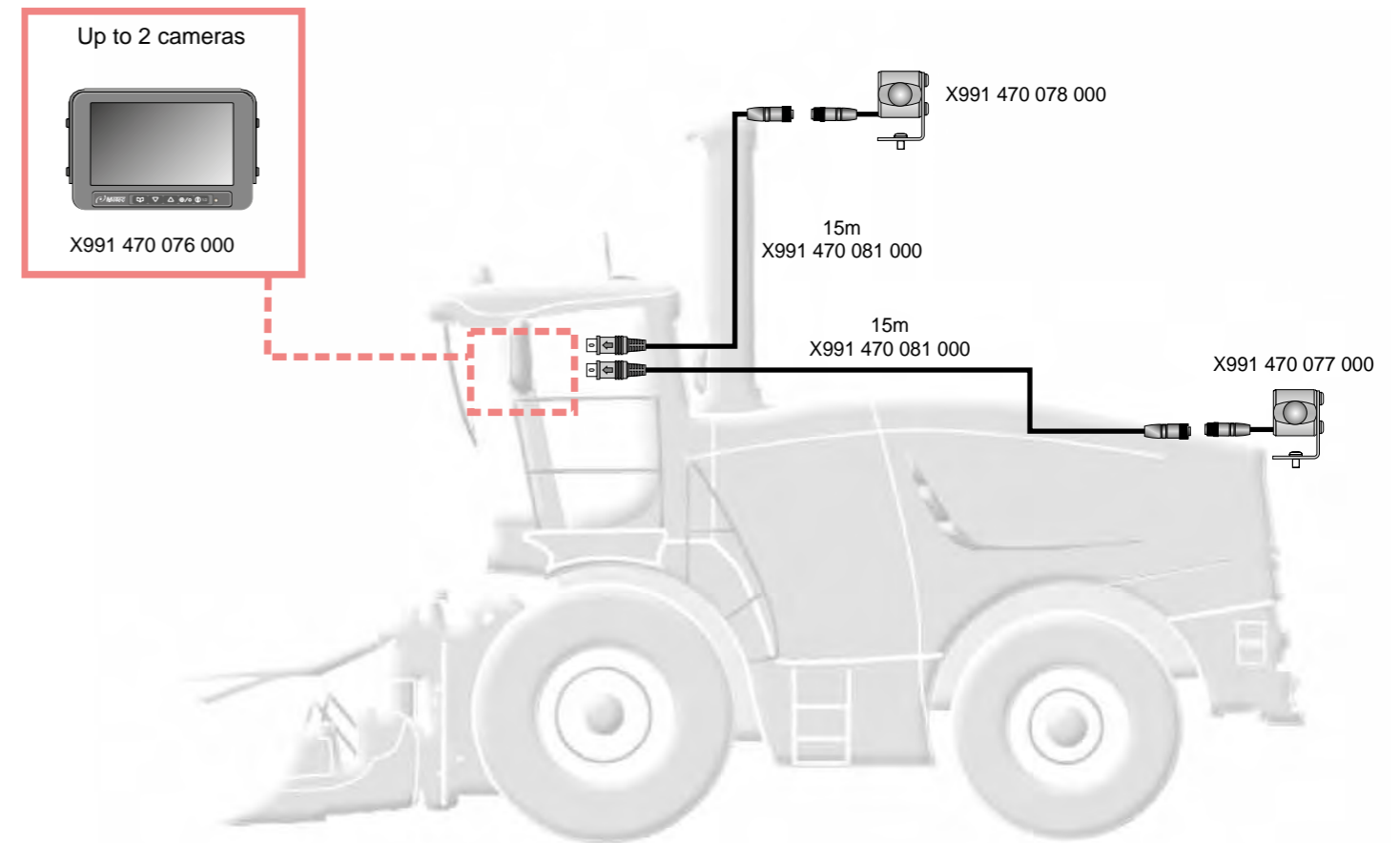
Monitor	Connection cable to the monitor	Adapter	Factory installed cables in the square baler	Adapter	Camera
Fendt Varioterminal 10.4"	X991 470 050 000	X991 470 064 000	X991 470 086 000	X991 470 088 000	X991 470 077 000
MF Datatronic 4	X991 470 060 000			X991 470 087 000	
MF 8700 Datatronic 4	X991 470 066 000			X991 470 087 000	
Motec Monitor	X991 470 054 000	X991 470 064 000		X991 470 087 000	



## Camera monitor systems for self-propelled harvesters

### Optimal communication between the harvester and tractor by using the Motec radio system.

The camera on the unloading spout of the harvester is permanently attached to the monitor. From here, the radio transmitter can send an arbitrary number of signals to receivers installed in the tractor. The image can be displayed on the Motec monitor as well as the Varioterminal. This way, all operators are kept up-to-date about the filling level of the loading vehicle and can optimise and synchronise the speed of their vehicles. The radio system X991 470 012 000 comprises a transmitter and receiver. An additional receiver, model X991 470 013 000, can be used to equip more transport vehicles. If several forage harvesters are used in the field, 3 different radio channels can be selected.

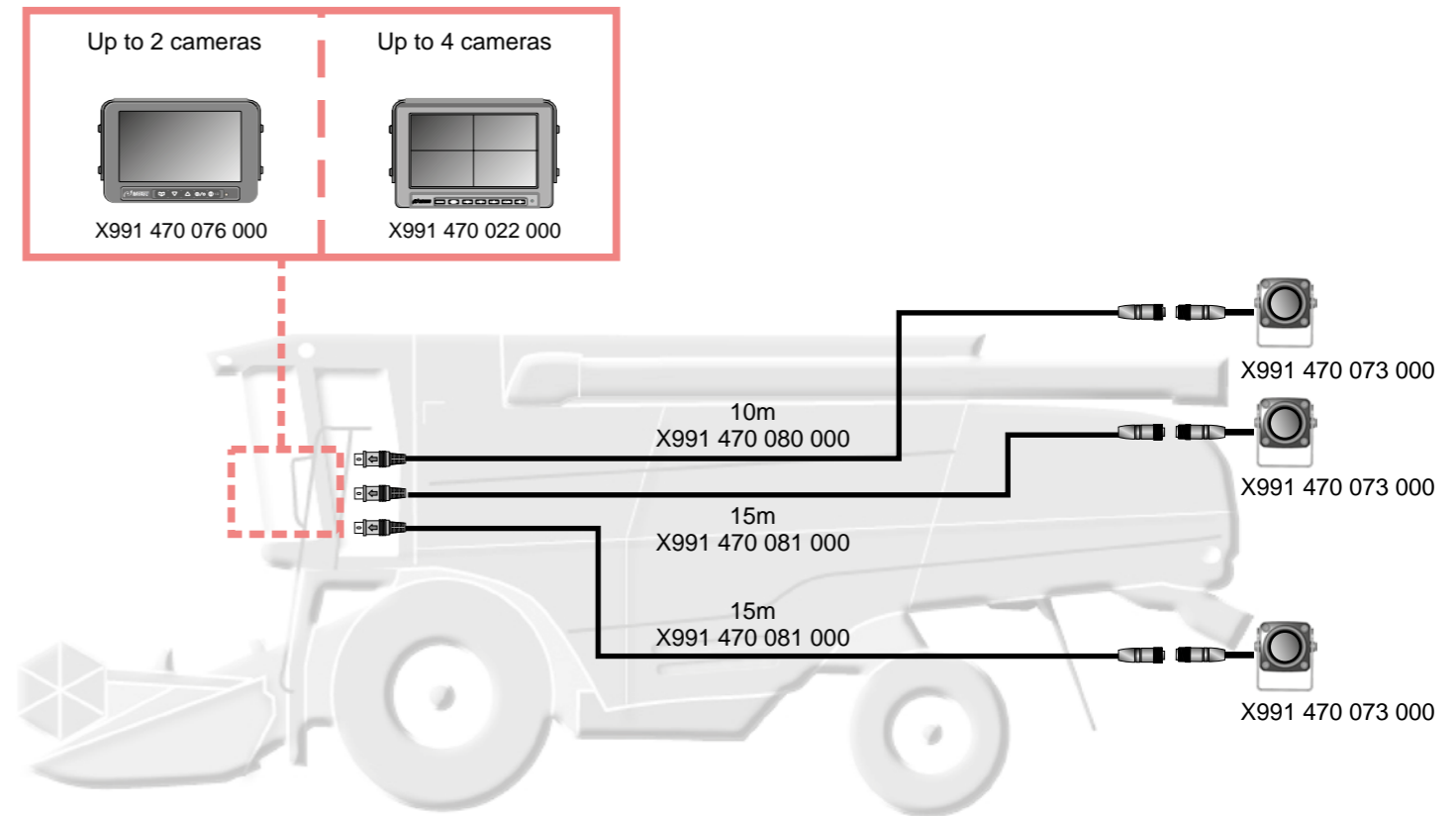




## Camera monitor systems for combine harvesters

### Cameras support the operator in a multitude of aspects:

- They monitor the area behind the vehicle and ensure the safety of persons and prevent damage to material
- They are installed to the vehicle's hitching mechanism to assist when coupling the cutter
- They are installed at the unloading spout of the loading vehicle
- They are installed at the grain tank to receive data about the filling level
- They are installed at the returns system to optimise the machine's set-up and ultimately increase the yield



### Two Motec camera systems may be considered for combine harvesters:

- Series MC6000 uses an anodised aluminium housing and an integrated window heating system allowing the camera to withstand all types of weather conditions, while the state-of-the-art CMOS imaging sensor produces a brilliant image.
- The compact design of series MC7000 allows the camera to be installed virtually anywhere. The robust stainless steel housing makes it possible to install the device horizontally, vertically, at an angle, or overhead. A setscrew can be used to easily adjust the lens of the camera.
- While transferring load from one vehicle to another, the image transmission using the Motec radio system may also be an interesting aspect.



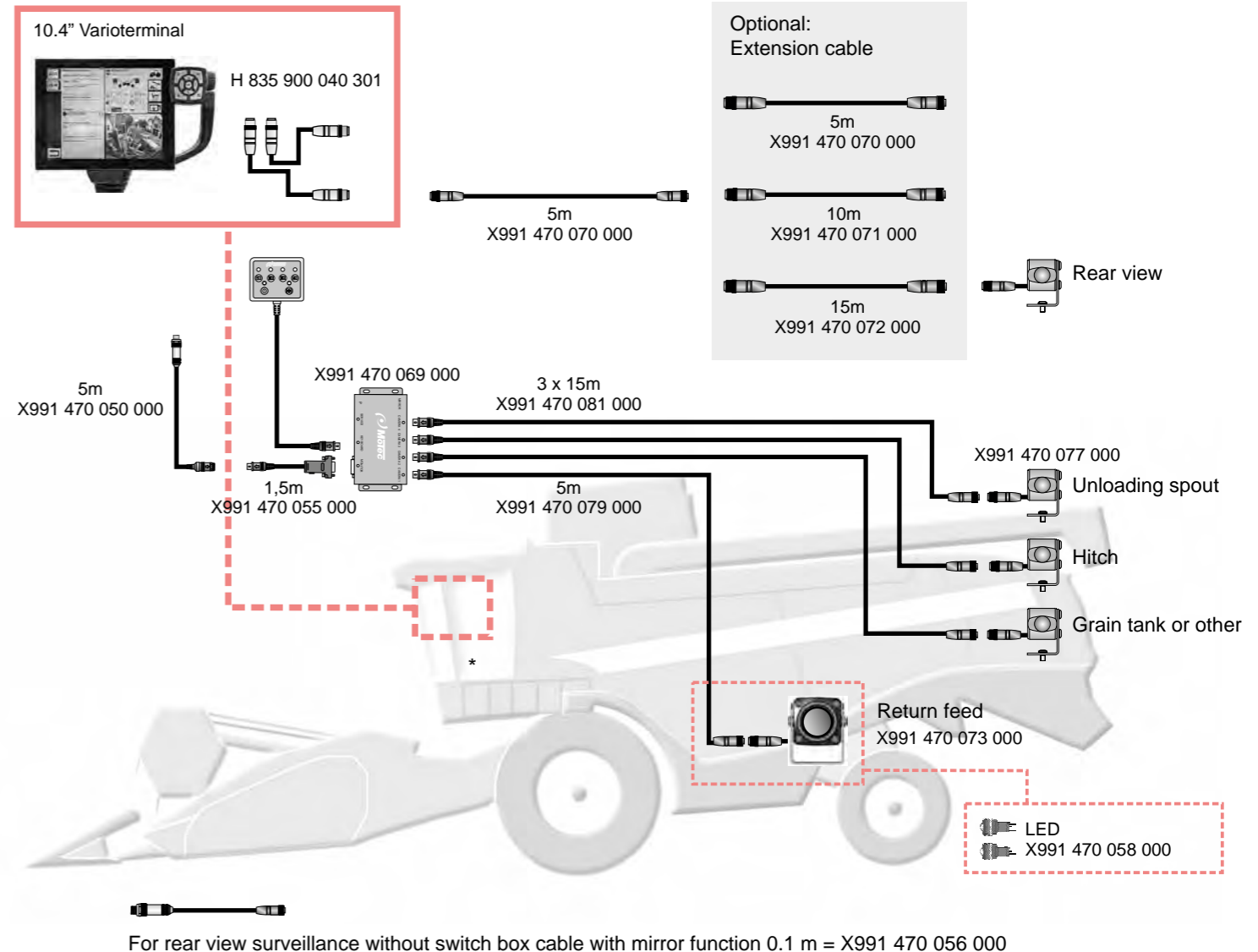
## Camera systems for combine harvesters with Vario-/Tech Touch Terminal

The 10.4" terminal uses 2 video inputs. One input is reserved for the factory-mounted camera which is intended to monitor the area behind the vehicle. A second camera can be connected to the second input, or a switch box may be used to connect up to 4 additional cameras.

The P/X series or the Centora/Delta use factory-installed cables attached to the unloading spout, the hitching mechanism and the grain tank. This provides the customer with the option to add the cameras wherever he requires.



Fendt P-/X-Serie /  
Massey Ferguson  
Centora/Delta



Fendt C-Serie/Massey Ferguson Beta

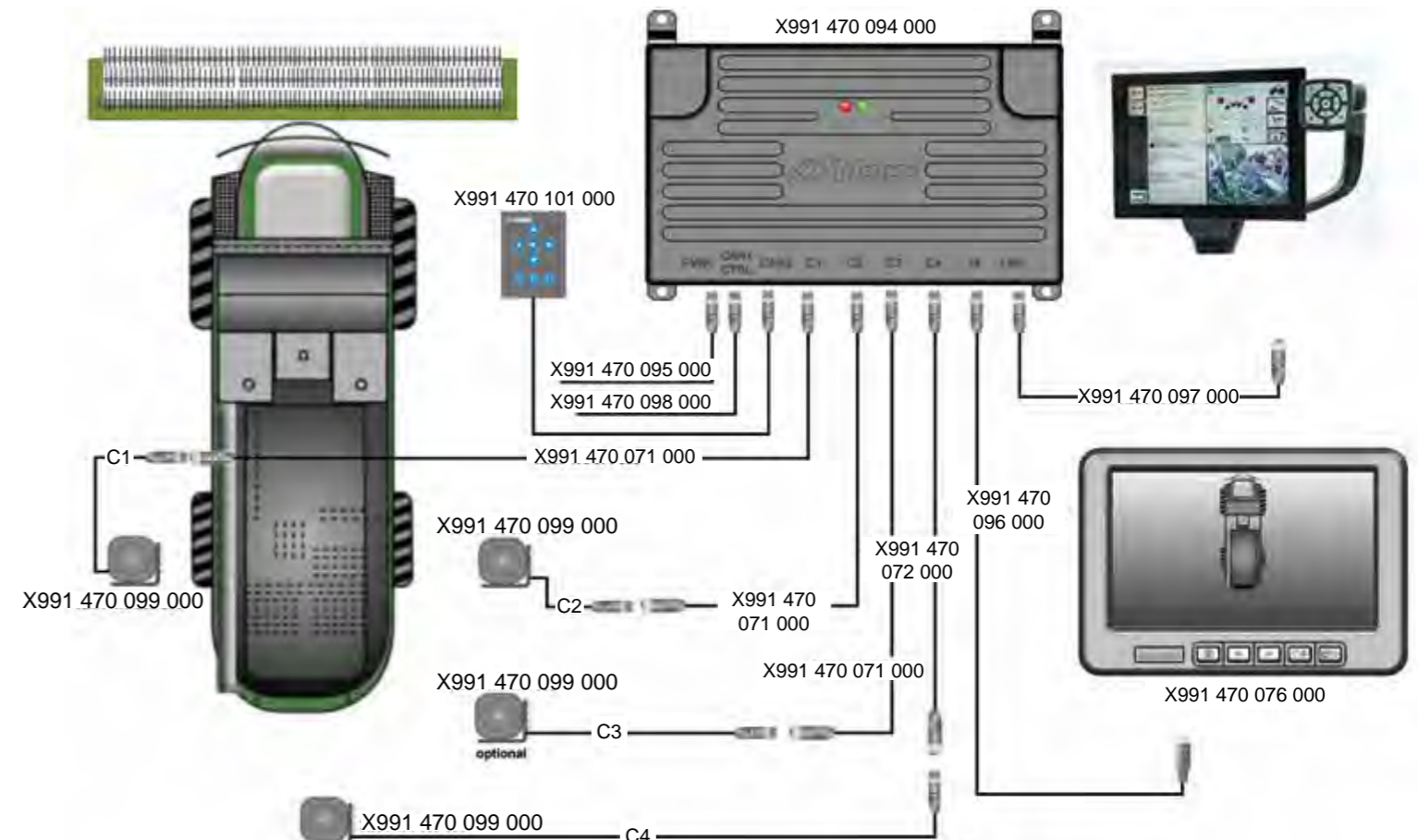


## MVS system with 270° Bird's eye view

Some areas of bulky agricultural equipment obstruct the machine operator's view or provide only a limited viewing range. This creates a safety risk for people and machine. This is where the Motec panoramic view system Mobile Vicinity Scout MVS is used. The images of three 180° cameras are combined in the video control module to a single image, creating a bird's eye view of the surroundings. The operator sees the immediate surroundings of his vehicle and is supported while manoeuvring his vehicle, veering of the vehicle's rear, in narrow town roads etc. The system can be connected to both a Motec monitor or a TechTouch-/Varioterminal.



For personal advice please contact Motec!  
Phone 0049 6433 9145 9528





## Technical data monitors

The monitor MD3071A – Made in Germany – complies with the highest requirements when it comes to agricultural applications. It is possible to connect 2 cameras, and alternately display the images on the screen. Upon request, the system can be expanded by connecting a switch box for additional cameras. When using the menu, the image of the area behind the vehicle can be easily mirrored.

If more than 2 cameras must be displayed (e.g., on large harvesters), the MD3072B-Quad monitor is the right choice. Up to 4 cameras can be connected. Each camera can be displayed individually. Furthermore, the simultaneous display on 2-4 cameras is possible by splitting the image. The image of each camera can be mirrored separately.



**MD3071A** X991 470 076 000

Housing protection class	IP30
Shock resistance	50 g
Operating temperature	-30 °C...+80 °C
Video inputs	3
Background lighting	500 cd/m <sup>2</sup>
Resolution (pixels)	H 800 x V 480
Screen diagonal	7"/17.8 cm/16:9
Power supply	9 V...60 V DC

**MD3072B-Quad** X991 470 022 000

Housing protection class	IP30
Shock resistance	20 g
Operating temperature	-20 °C...+80 °C
Video inputs	4
Background lighting	400 cd/m <sup>2</sup>
Resolution (pixels)	H 800 x V 480
Screen diagonal	7"/17.8 cm/16:9
Power supply	10 V...32 V DC

## Technical data cameras

The new camera MC6090D-4 was developed especially for use under extreme conditions. The housing protective class IP69K lets you use a high-pressure cleaner. The energy-efficient CMOS imaging sensor provides exceptional image quality – even if the light conditions are poor! The integrated window heating system, which switches on automatically if the temperature drops below 5°C, provides an unobstructed view.

The tried and tested camera MC7090P-4-E has a compact design and distinguishes itself by its versatile mounting options. Whether the camera is installed horizontally, vertically, or overhead, a setscrew makes it easy to adjust the camera's lens. Moreover, this camera is compliant with the high level protective class IP69K. For applications where the widest possible field of view must be covered (e.g., monitoring the loading vehicle), there is the variant MC7115P-4-E. It has a wide-angle lens with 115° horizontal field of view.

▼ NEW ▼



Optional:  
Magnetic base



X991 470 062 000

**MC6090D-4** X991 470 073 000

Housing protection class	IP68/IP69K
Shock resistance	100 g
Vibration-resistant	5 g
Operating temperature	-40 °C... +85 °C
Luminosity	< 0.05 lx
Housing	Aluminium anodised
Resolution (pixels)	H 640 x V 480
Horizontal angle of view	90°



Optional:  
Magnetic base



X991 470 063 000

**MC7090P-4-E** X991 470 077 000

**MC7115P-4-E** X991 470 078 000

Housing protection class	IP68/IP69K
Shock resistance	50 g
Vibration-resistant	5 g
Operating temperature	-35 °C... +65 °C
Luminosity	< 1 lx
Housing	Stainless steel
Resolution (pixels)	H 640 x V 480
Horizontal angle of view	90°/115°



# Product List

Art.-Nr.	Description	Matchcode
<b>Monitors</b>		
X991 470 076 000	7" Monitor with 2 video inputs	MD3071A
X991 470 022 000	7" Quad Monitor with 4 video inputs	MD3072B-Quad-VKL
<b>Cameras</b>		
X991 470 073 000	Camera MC6000 series, 90° horizontal image angle	MC6090D-4
X991 470 077 000	Camera MC7000 series, 90° horizontal image angle	MC7090P-4-E
X991 470 078 000	Camera MC7000 series, 115° horizontal image angle	MC7115P-4-E
<b>Cable</b>		
X991 470 074 000	Adapter from camera 4 pin to cable 5 pin	MK453.0,2
X991 470 075 000	Adapter from camera 5 pin to cable 4 pin	MK610.0,2
X991 470 079 000	Monitor camera cable, 5 m	MK496.5
X991 470 080 000	Monitor camera cable, 10 m	MK496.10
X991 470 081 000	Monitor camera cable, 15 m	MK496.15
X991 470 070 000	Extension cable M12, 5 m	MKS5
X991 470 071 000	Extension cable M12, 10 m	MKS10
X991 470 072 000	Extension cable M12, 15 m	MKS15
X991 470 015 000	Tractor to trailer cable set (for 1 camera)	MK84.5
X991 470 082 000		MK611.10
X991 470 005 000	Tractor to trailer cable set (for 2 cameras)	MK263.5
X991 470 083 000		MK710.10-G.4
X991 470 051 000	Single Varioterminal trailer cable	MK454.3
X991 470 052 000	Dual Varioterminal trailer cable	MK455.3
X991 470 056 000	Connector cable with mirror function for Varioterminal	MK518.0,1
X991 470 084 000	Cable between camera and Datatronic4, 5 m	MK610.5
X991 470 085 000	Cable between camera and Datatronic4, 10 m	MK610.10
X991 470 038 000	Connecting cable to Datatronic4, 1 m	MK367.1
X991 470 037 000	Cable between Datatronic4 and trailer, 2 m	MK370.2
X991 470 055 000	Cable between Datatronic4 and switch box, 1.5 m	MK435.1,5
X991 470 051 000	Varioterminal tractor trailer (for 1 camera), 3 m	MK454.3
X991 470 052 000	Varioterminal tractor trailer (for 2 cameras), 3 m	MK455.3
X991 470 056 000	Cable with mirror function for Varioterminal, 10 cm	MK518.0,1
X991 470 086 000	Cable as factory-fit in baler, 10 m	MK646.10
X991 470 059 000	Connecting cable from MVR6000 to Varioterminal	MK551.0,2
X991 470 060 000	Cable between baler and Datatronic4	MK564.2,5
X991 470 087 000	Adapter cable between camera and baler, 20 cm	MK693.0,2
X991 470 064 000	Adapter cable to baler, 20 cm	MK539.0,2
X991 470 088 000	Adapter cable camera - baler, 20 cm (Varioterminal)	MK857.0,2
X991 470 066 000	Cable from baler to cable in MF8600/8700, 2 m	MK539.2

Art.-Nr.	Description	Matchcode
<b>Radio system</b>		
X991 470 012 000	Wireless kit (sender + receiver)	MVR6000-TX, -RX
X991 470 013 000	Additional receiver	MVR6000-RX
<b>Accessories</b>		
X991 470 033 000	Switch box (2 cameras)	MB1205
X991 470 069 000	Switch box (4 cameras)	MB1405-Quad
X991 470 089 000	Power cable for monitor MD3071A	MD3071A-AK
X991 470 028 000	Power cable for monitor MD3072B/MD3072B-Quad	MD3072B-AK
X991 470 029 000	Swivel joint	MD-KG-ES
X991 470 008 000	Quick release mount	MC6000-SWH
X991 470 041 000	Stainless steel holder for camera series MC7000	MC7000-MH2
X991 470 058 000	LED signal light 12V ws	LED light
X991 470 062 000	Magnetic base for camera series MC6000	Haftmagnet-80-MS
X991 470 063 000	Magnetic base for camera series MC7000	Haftmagnet-80-MS-1
<b>Camera system for front implements</b>		
X991 470 022 000	7" Quad Monitor with 4 video inputs	MD3072B-Quad-VKL
X991 470 090 000	Cable from monitor to coupling joint (for 2 cameras), 10 m	MK263.10
X991 470 091 000	Cable plug - plug 13 pin, 2 m	MK817.2
X991 470 092 000	Cable for implement (for 2 cameras), 3 m	MK824.3
X991 470 102 000	Cable for implement (for 2 cameras), 5 m	MK710.5
X991 470 093 000	Camera MC3000 series, 40° horizontal image angle	MC3040A-4
<b>MVS system</b>		
X991 470 094 000	Video control unit for MVS system	MVCD1000
X991 470 095 000	Cable for power supply MVCD1000, 3 m	MK723.3
X991 470 096 000	Cable from monitor to MVCD1000, 4 m	MK722.4
X991 470 097 000	Cable from Varioterminal to MVCD1000, 4 m	MK763.4
X991 470 098 000	Control line for MVCD1000, 3 m	MK772.3
X991 470 099 000	Camera MC7000 series, 180° horizontal image angle	MC7180N-4
X991 470 100 000	MVS calibration kit, 8 markers 100 x 100 cm	MVS Calibration kit
X991 470 101 000	Motec operating unit	MBE1000







